# BRUHAT BENGALURU MAHANAGARA PALIKE

**“Development, Operation& Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years”**

Office of the
Executive Engineer
Project West Division
Sampige Road, Bhasyam Park
Bengaluru-560020

# BRUHAT BANGALORE MAHANAGARA PALIKE

No: EE/PW/TEND/02/2025-26

Office of the Executive Engineer,
Project Division, West Zone,
Joint Commissioner (West) Office
premises,
2nd Floor, Sampige Road,
Sheshadripuram,
Bangalore-560 020.

Date : 07-08-2025

INVITATION FOR SHORT TERM TENDERS (IFT)
(Two Cover System)
(SERVICE & GOODS TENDER)
(Through GOK KPPP;. Portal Only)

The Executive Engineer (Project – West), BBMP, Bengaluru invites Bids on behalf of the Chief Commissioner, Bruhat Bangalore Mahanagara Palike for the following Services & Goods from reputed Service Provider & Supplying Goods for the below work through KPPP portal www.kppp.karnataka.gov.in.

| Sl No. | Name of Work | Estimate Amount in Rs. | EMD Amount in Rs. | Tender processing fee (Rupees) | TENURE | Tender Type |
|---|---|---|---|---|---|---|
| 1 | Providing Cleaning Staff to BBMP Schools and Colleges of west Zone on outsourced Basis | 84,99,687/- | 1,70,000/- | As per e-Procurement portal | 12 Months | Service |
| 2. | Development, operation and Maintenance of Parking area including civil works installation of smart parking solutions at K.R Market in Chamarajapete Assembly Constituency.. | 4,32,07,651/- | 4,32,100/- | As per e-Procurement portal | 120 Months | Service |
| 3. | Providing and Installation necessary Kitchen equipments to Indira Canteen | 3301640/- | 66,100/- | As per e-Procurement portal | 3 Months | Goods |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Kitchen in Gandhinagara | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. | Providing and Installation necessary Kitchen equipments to Indira Canteen Kitchen in Mahalakshmi Layout | 3301640/- | 66,100/- | As per e-Procurement portal | 3 Months | Goods |

Calendar of Events:

| | | |
|---|---|---|
| 1. | Date of Commencement of Download of Document from e-Procurement website http://eproc.karnataka.gov.in: | On 12-08-2025 from 3:00 P.M. Onwards |
| 2. | Date and Time of Pre-bid Meeting : | On 16-08-2025 at 4:00 P.M. |
| 3. | Last Date and Time for uploading tenders in e-Procurement Portal : | On 25-08-2025 Upto 4:00 P.M. |
| 4. | Opening of Technical bid | On 26-08-2025 at 4:30 P.M. |
| 5. | Opening of Financial bid | On 28-08-2025 at 4:30 P.M. (if possible) |

The RFP is open to all Service Provider / Bidder / Participant in the e-procurement platform. The detailed RFP with the Bid document can be downloaded from the e-procurement portal.

A) Request for Proposal (RFP) Document may be downloaded from the Government of Karnataka e – Procurement Website www.eproc.karnataka.gov.in under login for Service Provider / Bidder / Participant. After login to Service Provider / Bidder / Participant, please scroll down to the right side bottom to see List of Tenders, please click there to find the Details of Letter of Invitation and download copy of the RFP Document. The RFP Document can be downloaded in the Portal as per the prescribed Date and Time published in the Portal. Only interested Service Provider / Bidder / Participant who wish to participate shall remit online Transaction Fee for the RFP Document after registering in the Portal. The Transaction Fee is non-refundable.

B) Service Provider / Bidder / Participant can access RFP documents on the website, fill them and submit the completed RFP documents into electronic tender on the website http://eproc.karnatka.gov.in/ after submitting the EMD and tender processing fee in the form of e-payment. EMD of the

unsuccessful bidders will be refunded only after issue of work order to successful bidder.

C) Pre-bid meeting will be held in the office of the Executive Engineer, Project-West, Joint Commissioner (West) Office premises, 2nd Floor, Sampige Road, Sheshadripuram, Bangalore 560020, Bidder should attach all the scanned copies of certificates pertaining to their eligibility criteria, qualification information documents, failing which the bid will not be considered. No physical documents shall be considered. Also all scanned copies should be visible and should have clarity.

D) Any effort by the bidder to influence the client in the bid evaluation, bid comparison or contract award decision results in rejection of the Service Provider / Bidder / Participants bid.

E) A successful bidder will have to execute an agreement with Executive Engineer, (Project-West), BBMP Bangalore within 15 days upon receipt of intimation along with performance Security as per contract price in form of Bank Guarantee obtained from a Nationalized Bank / Scheduled Bank payable at Bengaluru. The bidder shall supply the man power with all earnestness within seven days from the date of issue of work order, failing in such cases the performance security will be forfeited by presuming that he is not interested in the work and action will be taken to get the work executed through alternate agency.

F) The Bruhat Bangalore Mahanagara Palike, Bangalore reserves the right to accept / reject any or all tenders without assigning any reasons.

G) Corrigendum/ modifications / corrections, if any, will be published in the website only.

H) Further details of work can be obtained in the office of the the Executive Engineer, Project-West, Joint Commissioner (West) Office premises, 2nd Floor, Sampige Road, Sheshadripuram, Bangalore-560 020 on all working days between 3:30 pm - 5:30 pm.

I) GOK e-Procurement portal http://eproc.karnataka.gov.in for registration and e-payment details contact e-Procurement Helpdesk at 080-8022631200, 080- 8046010000.

Sd/-
Executive Engineer
Project-West
BBMP, Bengaluru-560020

Copy Submitted to:

1. Personnel Secretary Hon'ble Administrator to bring into the notice of Hon'ble Administrator.
2. Personnel Asst. to Hon'ble Chief Comm. to bring into the notice of Hon'ble Chief Commissioner.
3. Special Commissioner (Projects/ Additional Commissioner (Projects)., BBMP.
4. Copy submitted to the Addl. Commissioner (Finance) & Tender bulletin officer, BBMP for requesting1 to publish the tender notification in tender bulletin.
5. Copy submitted to the Joint Commissioner (West) for kind information.
6. Copy submitted to the Engineer-In-Chief for kind information.
7. Copy submitted to the Chief Engineer (West) for kind information.
8. Copy submitted to the Supt. Engineer (West) for kind information.
9. Copy submitted to Chief Auditor / Chief Account officer for kind information
10. Copy submitted to A.C.F (West) for information.
11. Copy to All Executive Engineer's, BBMP for information.
12. Copy to Executive Engineer No.1 & 2 Building Division, Bangalore Division for information.
13. Copy to Acct. Suptd. / Cashier of Division office for Necessary Action.
14. Copy to IT Advisor with Soft copy for needful action to place in the BBMP website.
15. Copy to Store Keeper/ Records Section, Mayo Hall, Bangalore for information and need full action.
16. Copy to Assistant Executive Engineer (Project-west).
17. Notice Board / Office Copy

Executive Engineer
Project-West
BBMP, Bengaluru-560020

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# SECTION I: INSTRUCTIONS TO BIDDERS

## A. INTRODUCTION

BBMP is on lookout for an established ICT based parking management, bidder who will associate with the organization to manage and support the implementation of Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years. The solution should comprise of Hardware and Software both and it should work seamlessly in the centers even if the internet connectivity is intermittent. The successful bidder will be expected to provide the operation and maintenance services at the developed parking site (PARKING) and complete solution therein for 10 years.

## B. CONTENTS OF BIDDING DOCUMENT

### 1. Scope of Bid as per General Condition of Contractor.

### 2. Payments

**2.1.** Payments to the BBMP will be made in accordance with Section VI GCC clause 13 and will be subjected in all respects to the terms and conditions of the Agreement. No party other than the supplier shall derive any rights from the Agreement.

### 3. Corrupt and Fraudulent Practices

**3.1.** The Government requires that Bidders/ Suppliers/ Contractors observe the highest standard of ethics during the execution of Government financed contracts. In pursuance of this policy, the Government:

a. Defines for the purposes of this provision, the terms set forth as follows:
   i. “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the contract execution; and
   ii. “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Government, and includes collusive practice among Bidders (prior to or after tender submission) designed to establish tender prices at artificial

non-competitive levels and to deprive the Government of the benefits of free and open competition;

b. will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
c. will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Government financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.
d. Bidders should not be associated, or have associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Client to provide consulting services for the preparation of the design, specifications, and other documents to be used for the services procurement of services under this Invitation of Tenders.

## 4. Eligible Bidders

**4.1.** The lead bidder/member should have minimum 5 years' experience of parking service/management to a government organization.

**4.2.** Bidders withSmart Parking Solution experience in Airport/Mall/any Government organization are also considered for this tender.

**4.3.** A lead Bidder must be Service provider having experience in the operation and maintenance of the Multi-Level Parking or surface parking facility by installing Smart solutions in Private place/airport/any Government organization place.

**4.4.** The bidder should have an authorisation letter from the technology provider along with the technical specifications as mentioned in the tender with their consent to provide technology to the bidder.

**4.5.** All technology equipment and software required for this should be from reputed companies and should be from a parking technology manufacturer. Hardware and software should be from same company.

**4.6.** The company providing the technology should have their technology installed in airports/Government Organisation across the country. (Relevant documents to be provided)

**4.7.** A lead Biddermust have carried out operation and maintenance of a SmartParking Solution including PMS and PGS with a minimum of 550 Four Wheelers and 450 Two Wheelers capacity. (Relevant documents including installation certificate & satisfactory certificate are to be submitted with authorized from Executive Engineer and above rank)

**4.8.** BBMP considers a conflict of interest to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice under Corrupt and Fraudulent Practices. In pursuance of these, bidders, suppliers, and contractors must observe the highest standard of ethics. BBMP will take appropriate actions if it determines that a conflict of interest has flawed the integrity of any services. Consequently, all Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if, including but not limited to:

- Have controlling shareholders in common; or
- Receive or have received any direct or indirect subsidy from any of them; or
- Have the same legal representative for purposes of this Bid; or
- Have a relationship with each other, directly or through common third parties, that puts them in position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of BBMP regarding this bidding process; or
- A Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which it is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or
- A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Equipment and services that are the subject of the bid.

**4.2.1** The Bidder should submit a Power of Attorney as per the format at **Annexure-8,** authorizing the signatory of the Bid to commit the Bidder. In the case of a Consortium, the Members should submit a Power of Attorney in favor of the Lead Member as per format at **Annexure-9.**

**4.2.2**. In case the Bidder is a Consortium, it shall comply with the following requirements:

(a) Number of members in a Consortium shall not exceed 2 (Two);

(b) Members of the Consortium shall nominate one member as the lead member (the “Lead Member”), the Bid should contain the information required for each member of the Consortium;

(c) The nomination(s) of the Lead Member shall be supported by a Power of Attorney, as per the format at **Annexure-9**, signed by the other member of the Consortium;

(d) The Bid should include a brief description of the roles and responsibilities of individual members, particularly with reference to financial and O&M obligations;

(e) An individual Bidder cannot at the same time be member of a Consortium applying for bid Further, a member of a particular Bidder Consortium cannot be member of any other Bidder Consortium applying for the bid;

(f) Members of the Consortium shall enter into a binding Memorandum of Understanding (the "Memorandum of Understanding" or "MOU"), for the purpose of submitting Bid and should submit the same along with the Bid. MOU should be specific to the Package and should fulfill the requirements set out below, failing which the Bid shall be considered non-responsive. MOU shall, inter alia:

i. Convey the intent of the members of the Consortium to enter into the Agreement in case the bid is awarded to the Consortium;
ii. The Lead Member would enter into the Agreement with BBMP on behalf of the members of the Consortium and subsequently carry out all the responsibilities as the Service Provider in terms of the Agreement;
iii. Clearly outline the proposed roles and responsibilities of each member of the Consortium;
iv. Include a statement to the effect that all members of the Consortium shall under the Agreement, be liable jointly and severally for all obligations of the Service Provider in relation to the bid.

(g) MOU entered into, between the members of the Consortium shall be specific to the project and should contain the above requirements, failing which the Proposal shall be considered non-responsive and liable for rejection.

(h) Any entity which has been barred by the Central/ State Government, or any entity controlled by it, from participating in any project (BOT or otherwise), and the bar subsists as on the date of Bid, would not be eligible to submit a Bid, either individually or as member of a Consortium.

(i) A Bidder including any Consortium Member should in the last 1 (one) year, have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder, Consortium Member, as the case may be, nor has been expelled from any project

or contract by any public entity nor have had any contract terminated by any public entity for breach by such Bidder, Consortium Member.

(j) In computing the Technical and Financial Capacity of the Bidder under Section III, the Technical and Financial Capacity of the Bidder(s)/Members of consortium would be considered. Experience of associate company/parent company/ subsidiary company shall not be considered for qualification purposes.

(k) The following conditions shall be adhered to while submitting the Bid:

I. Bidders should attach clearly marked and referenced continuation sheets in the event that the space provided in the prescribed forms in the Annexures is insufficient. Alternatively, Bidders may format the prescribed forms making due provision for incorporation of the requested information;

II. Information supplied by the Bidder (or other constituent Member if the Bidder is a Consortium) must apply to the Bidder named in the Bid and not, unless specifically requested, to other associated companies or firms.

III. In case of a Consortium one of the member should satisfy the financial turn over criterion as lead member and should have a minimum of 9Crore in any of the three years over the last 5 years.

IV. Notwithstanding anything to the contrary contained herein, in the event that the Bid Due Date falls within three months of the closing of the latest financial year of a Bidder, it shall ignore such financial year for the purposes of its Bid and furnish all its information and certification with reference to the 5 (five) years, preceding its latest financial year. For the avoidance of doubt, financial year shall, for the purposes of a Bid hereunder, mean the accounting year followed by the Bidder in the course of its normal business.

## (l) Change in Consortium

The Authority restricts a change in control of a Consortium; the Bidder is not allowed to change the composition of the Consortium during the Bidding Process and Lock in period for all such consortium shall be minimum 1 year from the date of signing of agreement. In the event of dispute between the consortium members which hampers the work, change in Consortium is allowed with the prior permission of BBMP& in the event of change of consortium the lead member shall continue to be lead member at all time during the period of agreement, otherwise it would, notwithstanding anything to the contrary contained in the Agreement, be deemed to be a breach thereof, and the Agreement shall be liable to be terminated without the Authority being liable in any manner whatsoever to the Service Provider. In such an event, notwithstanding anything to the contrary contained in the Agreement,

the Authority shall forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

## 5. Clarification of Bidding Documents

**5.1.** Prospective Bidders requiring any clarification of the Bidding documents may write queries and upload in the KPPPPortal or communicate to the Office of Executive Engineer PROJECT WEST, Division, Sampige Road, Bhashyam park, Bengaluru-560020. The Client will respond to any request for clarification of the tender documents which it receives before pre bid meeting and same shall be uploaded in the KPPP portal.

**5.2.** BBMP is not responsible for the completeness of the Bidding Document and its addenda if they were not issued directly from BBMP.

**5.3.** The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the Bid.

## 6. Amendment of Tender documents

**6.1.** Before the deadline for submission of tenders, the BBMP may modify the bidding documents by issuing addendum.

**6.2.** Any addendum thus issued shall be part of the tender documents and shall be communicated through KPPP portal and will be binding on them.

**6.3.** To give prospective Bidders reasonable time in which to take an addendum into account in preparing their tenders, the BBMP shall extend as necessary the deadline for submission of tenders.

# C. PREPARATION OF TENDERS

## 1. Cost of Bidding

7.1 The Bidders shall be accompanied by Bid processing fee for the specified amount mentioned in the KPPPportal. The supplier/manufacturer can pay the Bid processing fee in the KPPPportal using any of the following payment modes.

- Credit card

- Direct debit
- National Electronic Fund Transfer (NEFT)
- Over the counter (OTC)

7.2 For details, registration and e-payment, visit GOK KPPP portal website https://KPPP.karnataka.gov.in/#/portal/portal-home

## 2. Language of Tender

8.1 The bid prepared by the Bidder as well as all correspondence and documents relating to the tender exchanged by the Bidder and the Client, shall be in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Tender, the translation shall govern.

## 3. Documents Comprising the BID

**9.1.** The Bid shall comprise three envelopes submitted online simultaneously, one containing the requisite EMD as per ITB clause-20 and second containing Technical Proposal and the third Price bid (Online only), The bidder pay the EMD through e-payment under any one of the four options, through Credit card, direct debit, National Electronic Fund Transfer (NEFT), Over The Counter (OTC) and the confirmation receipt shall be submitted along with the tender. And, copy of technical documents, Price Bid/ financial offer should be submitted online, in case of manual submission of Price Bid, it will be rejected.

**9.2.** Technical Proposals will be opened online the specified address, date and time. The Price Proposals shall remain sealed and will be held in custody on online portal. The Technical Proposals will be evaluated. No amendments or changes to the Technical Proposals will be permitted once bid get validated online. Technical Proposals, which does not conform, to the specified requirements will be rejected as deficient Bids.

**9.3.** Price Proposals of technically qualified Bidders will be opened online as per the specified date and time. The Price Proposals will be evaluated and the Contract will be awarded to the Bidder who's Bid has been determined to be the highest evaluated substantially responsive Bid.

**9.4.** The Technical Proposal shall contain the following:

- Technical Proposal Submission Sheet;
- Written confirmation authorizing the signatory of the Bid.
- Documentary evidence establishing the Bidder's eligibility to bid.
- Documentary evidence that the Equipment and Related Services conform to the Bidding Document;

- Information in Appendices of Technical proposal Submission Sheet
- Documentary evidence establishing the Bidder's qualifications to perform the contract.
- Manufacturers authorization if applicable
- Power of Attorney for signing of Bid
- Memorandum of Understanding in case of Consortium
- Any other document required as per the Bid Data Sheet and Tender.

**9.5.** The Price Proposal shall contain the following:

Price Proposal Submission Sheet to be filed online only.

## 10. Bid Submission Sheets and Price Schedules

**11.1.** The Bidder shall submit the Technical Proposal and the Price Proposal online using the appropriate Submission Sheets furnished in Bidding Forms. These forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

**11.2.** The Bidder shall submit, as part of the Price Proposal, the Price Schedules for Equipment and Related Services, according to their origin as appropriate, using the forms furnished online

## 12. Alternative Bids

**12.1.** Alternative bids shall not be considered**.**

## 13. Bid Prices

The prices quoted by the Bidder in the Price Proposal Submission Sheet and in the Price Schedules shall conform to the requirements specified in the tender.

**13.1.** A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected.

**13.2. Terms of Payment**

**13.3.** The minimum Annual Amount (including GST & all other taxes) payable to BBMP is fixed at **Rs.40,00,000/- (Rupees Forty lakhs only) per year for the initial five years, Rs.42,00,000/- (Rupees Forty-two lakhs only) for 6$^{th}$ year, Rs.44,10,000/-(Rupees Forty-four lakhs ten thousand only) for 7$^{th}$ year, Rs.46,30,500/- (Rupees forty-six lakhs thirty thousand five hundred only) for 8$^{th}$ year, Rs.48,62,025/- (Rupees forty-eight lakhs sixty-two thousand twenty-five only) for 9$^{th}$ year, Rs.51,05,126/- (Rupees fifty-one lakhs five thousand one hundred twenty six only) for 10$^{th}$ year.** Hence, the competing Tenderer must quote more than the minimum

amount fixed. The quoted price shall be inclusive of GST, service tax/other taxes.

**13.4.** Contractor has to pay Annual Amount payable to BBP in the form of DEMAND DRAFT (as stated above) the agreed bid amount in 4 equal installments of the particular year. Delay in payment will attract an interest at the rate of 6% per annum. If the Contractor fails to pay the money even after three reminders (Notices), the contract will be cancelled at his risk and cost of Contractor. All the deposits will be forfeited.

**13.5.** However, the expenditure towards development of parking area, development of parking Entry Exit area, Providing Parking Management System with necessary infrastructure, providing and installing necessary complete hardware and software solution including boom barriers, handheld devices, porta-cabin/workstation, switches, gateway for smart parking system, installation of CCTV based surveillance solution, Mobile App for parking services etc., should be borne by the contractor.

## 14. Currencies of Bid

Bidprices shall be quoted in the Indian Rupees.

## 15. Documents Establishing the Eligibility of the Bidder

**15.1.** To establish their eligibility Bidders shall:

a. Complete the eligibility documents as required**.**

## 16. Documents Establishing the Conformity of the Bidding Document

**16.1.** To establish the conformity to the Bidding Document, the Bidder shall furnish as part of its Technical Proposal the documentary evidences.

**16.2.** The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed description of the essential technical and performance characteristics demonstrating substantial responsiveness of the Services to those requirements.

**16.3.** Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by Bidder in the Schedule of Supply, are intended to be descriptive only and not restrictive**.**

## 17. Documents Establishing the Qualifications of the Bidder

**17.1.** To establish its qualifications to perform the Contract, the Bidder shall submit as part of its Technical Proposal the evidence indicated for each qualification criteria specified in Evaluation and Qualification Criteria.

## 18. Period of Validity of Bids

**18.1.** Bids shall remain valid for the period of 90 days after the bid submission deadline date prescribed by BBMP. A Bid valid for a shorter period shall be rejected by BBMP as non-responsive.

**18.2.** In exceptional circumstances, prior to the expiration of the bid validity period, BBMP may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If validity of their Bids is extended the Earnest Money Deposit (EMD) shall also be extended for a corresponding-period. A-Bidder may refuse the request without forfeiting its Earnest Money Deposit (EMD). A Bidder granting the request shall not be required or permitted to modify its Bid.

## 19. Earnest money deposit (EMD)

**19.1.** The Bidder shall furnish, as part of his tender, earnest money deposit in the amount as specified. This earnest money deposit shall be in Indian Rupees and payment to be made through e-payment under any one of the four options, through Credit card, direct debit, National Electronic Fund Transfer (NEFT), Over theCounter (OTC) and the confirmation receipt shall be submitted along with the tender.

**19.2.** The earnest money deposit shall be denominated in Indian Rupees and shall:

a. At the bidder's option, minimum of Rs. 1,00,000/- to be paid through the e-paymentand balance be in the form of either a **letter of credit, a demand draft, or a bank guarantee from a nationalized/Scheduled Bank located in India; The original copy of the letter of credit, a demand draft, or a bank guarantee shall be submitted to this office after closing of tender but before opening the technical bid**. Even the bidder has to upload the above document as a part of technical bid document in e procurement portal.

b. Be substantially in accordance with one of the form of earnest money deposit approved by the Client prior to tender submission;

c. Be payable promptly upon written demand by the Client in case any of the conditions listed are invoked;

d. Be submitted in its original form; copies will not be accepted; and

e. Remain valid for a period of 90 days beyond the original validity period of tenders, or beyond any period of extension subsequently requested

**19.3.** The Earnest Money Deposit (EMD) of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder furnishing the Performance Security.

**19.4.** The Earnest Money Deposit (EMD) of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security.

**19.5.** The Earnest Money Deposit (EMD) may be forfeited:

a. If a Bidder withdraws its Bid during the period of bid validity

b. If the successful Bidder fails to:

i. Sign the Contract

ii. Furnish a Performance Security.

## 20. Format and signing of Tender

**20.1.** All pages of the Bid shall be signed by the person signing the Bid. Bidder has to scan these original documents and upload at appropriate place on the online portal.

**20.2.** Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

# D. SUBMISSION AND OPENING OF BIDS

## 21. Sealing and Marking of Bids

21.1. "Technical proposal, EMD submission details along with full EMD requisites" should be submitted online as well as a hard copy of the same without changing the content to be submitted to the office of Executive Engineer PROJECT WEST(BBMP) within one working day after bid submission date, "Price Proposal" should be submitted online only.

## 22. Deadline for Submission of Bids

22.1. Bids must be uploaded no later than the date and time indicated in online notice at the online portal.

22.2. BBMP may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document as addendum, in which case all rights and obligations of BBMP and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

## 23. Late Bids

23.1. Online portal shall not allow the bidder to bid after the specified time and hence bidders should take extra care of the timings of the bid submission.

## 24. Withdrawal, Substitution, and Modification of Bids

25.1 On the online portal bidders are allowed to withdraw, substitute, or modify its Bid before the final submission time. A Bidder will not be allowed to withdraw, substitute, or modify its Bid after the scheduled submission time.

## 25. Bid Opening

25.1. The technical proposal will be opened online as well as hard copy as per schedule time and date and Price proposal of only technically qualified bidders shall be opened.

25.2. Price proposals will be opened online only.

# E. EVALUATION AND COMPARISON OF BIDS

## 26. Confidentiality

26.1. Information relating to the examination, evaluation, comparison, and post qualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.

26.2. Any attempt by a Bidder to influence BBMP in the examination, evaluation, comparison, and post qualification of the Bids or Contract award decisions may result in the rejection of its Bid.

## 27. Clarification of Bids

27.1. To assist in the examination, evaluation, comparison and post-qualification of the Bids, BBMP may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by BBMP shall not be considered. BBMP request for clarification and the response shall be in writing or through e mail. No change in the prices or substance of the Bid shall be sought, offered, or permitted.

## 28. Responsiveness of Technical Proposal

28.1. BBMP determination of the responsiveness of a Technical Proposal is to be based on the contents of the Technical Proposal itself.

28.2. A substantially responsive Technical Proposal is one that conforms to all the terms, conditions, and specifications of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

a. Affects in any substantial way the scope, quality, or performance of the Related Services specified in the Contract; or

b. Limits in any substantial way, inconsistent with the Bidding Document, BBMP rights or the Bidder's obligations under the Contract; or

c. If rectified would unfairly affect the competitive position of other Bidders presenting

d. Substantially responsive Technical Proposals

## 29. Nonconformities, Errors, and Omissions

29.1. Provided that a Technical Proposal is substantially responsive, BBMP may request that the Bidder submit the necessary information or documentation, within a reasonable of Price Proposals on the following basis:

- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.
- If there is a discrepancy between words and figures, the amount in words shall prevail.

## 30. Preliminary Examination of Bids

30.1. BBMP shall examine the Technical Proposal to confirm that all documents and technical documentation requested have been uploaded on online portal, and to determine the completeness of each document submitted.

30.2. BBMP shall confirm that the following documents and information have been provided in the Technical Proposal. If any of these documents or information is missing in the uploaded documents on the online portal, the offer shall be rejected.

- Technical Proposal Submission Sheet.
- Written confirmation of authorization to commit the bidder.
- Earnest Money Deposit (EMD).

## 31. Examination of Terms and Conditions; Technical Evaluation

31.1. BBMP shall examine the Bids to confirm that all terms and conditions specified in Bid Document have been accepted by the Bidder without any material deviation or reservation.

31.2. BBMP shall evaluate the technical aspects of the Bid submitted in accordance to confirm that all requirements specified in Schedule of

Supply of the Bidding Document have been met without any material deviation or reservation.

31.3. If, after the examination of the terms and conditions and the technical evaluation, BBMP determines that the Technical Proposal is not substantially responsive it shall reject the Bid.

## 32. Right to Accept Any Bid, and to reject any or All Bids

32.1. BBMP reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to the Bidders.

# F. AWARD OF CONTRACT

## 33. Award Criteria

33.1. BBMP shall award the Contract to the Bidder whose offer has been determined to be the highest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder has remained qualified to perform the Contract satisfactorily.

## 34. Right to Vary Quantities at Time of Award

34.1. At the time the Contract is awarded, BBMPreserves the right to increase or decrease the quantity of Equipment and Related Services originally specified in Bid document, provided this does not exceed the 25 percentage, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document**.**

## 35. Notification of Award

35.1. Prior to the expiration of the period of bid validity, BBMP shall notify the successful Bidder, in writing, that its Bid has been accepted.

35.2. Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

## 36. Signing of Contract

36.1. Promptly after notification, BBMP shall send to the successful Bidder the Agreement.

36.2. Within fifteen (15) days of receipt, the successful Bidder shall sign the agreement and return it to BBMP.

## 37. Performance Security

37.1. Within 15 days of receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Security deposit (Refundable without Interest) i.e., 5% of Total Revenue generated for 10 years in any of the forms given below for an amount of Rs.22,00,000/- (RsTwenty TwoLakhs Only) valid for every 10(TEN) years and subsequent renewal till the end of contract period plus 6 months.

- Fixed Deposit
- Demand Draft
- Bank Guarantee

37.2. Failure of the successful Bidder to submit the Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money Deposit (EMD). In that event BBMPmay award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by BBMP to be qualified to perform the Contract satisfactorily.

## SECTION II – BID DATA SHEET (BDS)

| | |
|---|---|
| **A. INTRODUCTION** | |
| 1. | Executive Engineer, BBMP, on behalf of Zonal Commissioner, West Zone BBMP here by invites sealed bids from competent bidders For Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years. |
| **B. BIDDING DOCUMENT** | |
| 2. | All correspondence, collection and submission of Bidding document is to be made to the O/O Executive Engineer-PROJECT WEST, BBMP. |
| | Clarification may be obtained prior the pre bid meeting as per the schedule. |
| **C. PREPARATION OF BIDS** | |
| 3. | The language of the Bid is English.<br><br>Response to the bids in English. |
| 4. | Alternative Bids are not permitted. |
| 5. | The prices quoted by the Bidder shall be: fixed. |
| 6. | The currency of the Bid shall be: Indian rupees. |
| 7. | The bid validity period shall be 90 days. |
| 8. | Bidder may contact the officials at BBMP to get any other information about the equipment's and vehicles required. |
| **D. SUBMISSION AND OPENING OF BIDS** | |
| 9. | Only one Bid is to be submitted by each bidder. Technical and financial bid should be submitted online. |
| 10. | The written confirmation of Authorization of manufacture to sign. |
| **E. EVALUATION, AND COMPARISON OF BIDS** | |
| 11. | Bidders are allowed to quote price in Indian Rupees only. |

| F. AWARD OF CONTRACT | |
|---|---|
| 12. | BBMP shall award the Contract to the Bidder whose offer has been determined to be the highest annual amount and is substantially responsive to the Bidding Document. |

## SECTION III – EVALUATION AND QUALIFICATION CRITERIA

This Section complements the Instructions to Bidders. It contains the criteria that the Client may use to evaluate a bid and determine whether a Bidder has the required qualifications. No other criteria shall be used.

### A. EVALUATION CRITERIA

BBMP will evaluate and compare bids on the basis of price quoted by the eligible bidders to arrive at the highest cost and the methodology/presentation covering the operations strategy.

#### 1. Technical Criteria

**1.1.** The minimum technical level of Services offered by the bidder shall comply with the minimum acceptable level and specification for each criteria enumerated in the Schedule of Supply.

The non-compliance of the minimum acceptable criteria shall make the bidder’s bid as non-substantive. Whenever possible, these criteria will be evaluated on a pass-fail basis.

#### 2. Economic Criteria

**2.1.** Adjustment for Deviations from the Terms of Payment

Deviations from the Terms of Payment are not permitted.

**2.2.** Omissions or Missing Items:

The cost of omissions or missing items in the scope of supply, services, etc. would be not be considered. Bids offered for part scope of work from one lot shall be rejected.

**2.3.** Local Handling and Inland Transportation

Cost on Installation of Smart solutions (software and hardware components) shall be included in the PRICE. These costs will be taken into account during bid evaluation. If a Bidder fails to include such costs in its bid, it will be considered as included in his bid price bid.

**3.** (i) Shortlisted Service Provider may associate with other shortlisted **ServiceProvider:No**

(ii) The minimum number of key professional staff months required for theassignmentfor each shift are:

| | | |
|---|---|---|
| 1 | Engineer/Technician for (FireFighting/STP) | 2 each orMultidisciplinary |
| 2 | Manager | 1 |
| 3 | Supervisors | 3 |
| 4 | SecurityHeadwithStaff | 18 |
| 5 | Ticketissuer / Collector | 12 |
| 6 | Housekeeping Staff | 8 |

NOTE:Aboveshownisonlyminimumtentative&shoulddeploytherequired additional stafft overall supervision& Management.

(a) The minimumrequiredexperienceofproposedkey professional staff is:

1. Engineer/ Technician for (Fire Fighting/STP):This isimportant assignment and shall be responsible for overall maintenance &properfunctioningof Firefighting/Lifts/SewerageTreatment Plant, etc. He/they should have experience in above & shouldhave minimum 2 years' experience of similarnature work.
2. Supervisor:This is the senior position engaged for the assignment. Theteam leader shall be responsible for overall performance of the ServiceProviderfortheproject.ThisincludesOverseeing,Controllingthemovementofvehicleswithinbuilding,Maintaining&operatingthemetering system, Overall maintenance of building including Firefighting,lifts, Water Supply, Housekeeping, etc. A graduate degree havingminimumexperienceof5years.Heshouldhaveexperiencein,coordinating and leading the complete management of parking system &workedassupervisorshouldhave minimum2years' experienceofsimilarnature of work.
3. SecurityHeadwithStaff:Shouldbevisible,Securespremisesandpersonnelbypatrollingproperty;monitoringsurveillanceequipment;inspectingbuildings,equipment,andaccesspoints;permitting entry. Obtainshelpby soundingalarms. Preventslossesand damage byreportingirregularities;informingviolatorsofpolicyandprocedures;restrainingtrespassers.
Controlstrafficwithinpremisesbydirectingdrivers.
Completesreportsbyrecordingobservations,information,occurrences,andsurveillanceactivities.
Maintainsenvironmentbymonitoringandsettingbuildingandequipmentcontrols.
Maintainsorganization'sstabilityandreputationbycomplyingwithlegalrequirements. Ensures operation of equipment by completing

preventivemaintenancerequirements;followingmanufacturer's instructions;troubleshootingmalfunctions;callingforrepairs;evaluatingnewequipment and techniques. Contributes to team effort by accomplishingrelated results as needed. He should be responsible for overall safety.He shall hold agraduate degree with an overall experience of 5 years. He should have minimum 1 yearexperience as Security Head.

4. **Ticket issuer**:Greeting passengers and customers that approach theircounter. Answering questions regarding dates, prices, and availability ofslots and Helping customers if any. Should have minimum 1 year experience ofsimilarnature work.

5. **Housekeeping Staff:**Dustingandpolishingfurnitureandfixtures.Cleaning and sanitizing, Sweeping/ vacuuming, polishing,and mopping hard floors by using any cleaning equipment such asvacuums,mops,andothercleaningtools.
   Cleaningmirrorsandother glass surfaces. Emptying trash receptacles and disposing of waste aspernorms. Shallhave minimum 1 year experienceinrelevantfields.

(vi) Reports which are part of the assignment must be written in English only.

**4. The number of points to be given under each of the evaluation criteria is:**

| | | **Points** |
|---|---|---|
| (i) | Presentation of Operational Strategy and Methodology | 35 |
| (i) | Specific experience of the Service Providers related to the Assignment | 25 |
| (iii) | Equipment and software to be used | 20 |
| (iv) | Adequacy of the proposed work plan in responding to the TOR | 10 |
| (v) | Qualifications and competence of the key professional staff For the Assignment | 05 |
| (vi) | Local office in Bengaluru | 05 |

TotalPoints**:100**

| | | |
|---|---|---|
| The number of points to be given for qualifications and competence of the keyprofessional staff or the assignmentare: | | Points |
| (i) | Generalqualifications | 30 |
| (ii) | Workinginsimilar projects | 60 |
| (iii) | Experienceinregion&language | 10 |
| | TotalPoints: | **100** |

**Theminimum technicalscore required to pass is: 75Points**

**5. The address forCorrespondence is:**

Office of Executive Engineer PROJECT WEST, Division, BBMP, Sampige Road, Bhasyam park, Bengaluru-560020.

## B. QUALIFICATION CRITERIA

### 1. Financial Criteria:

The Bidder's average turnover in any three years of last five (5) financial years Should be**Rs.9** Croreand Turnover Certificate should be authorized by CA:

Note:Financial Turnover of the Previous Years shall be given a Weightage of 10% per year to bring them to the Price Level of 2025-26. In support of this, the Service Provider shall furnish the Certificate from Chartered Accountant along with the Technical Proposal.

**1.1.** The Bidder is to submit audited statements of accounts for the last five (5) years, along with its bid as per **Annexure 5**. The Bidder has to submit a certificate from registered charted accountant on Average Turnover for last 5 years along with accounts and certified balance sheet certified by a registered chartered accountant supported by copies of tax returns or the last five (5) years, along with its bid. In the event that the **BBMP** in the Bidder's audited statement notes consistent losses or the risk of insolvency, the Bidder may be disqualified. Where necessary, **BBMP** will make enquiries with the Bidder's Bankers.

**1.2** In case of a Consortium, the combined Technical Capacity and Financial Capacity of the Lead Member and the other member of the Consortium will be considered.

**1.3** The Bid must be accompanied by the Audited Annual Reports of the Bidder (of each Member in case of a Consortium) for the last financial year, preceding the year in which the Bid is made

| **Bidder type** | **Net Worth** | **Annual Turnover for past three years** | | |
|---|---|---|---|---|
| | **Year 1** | **Year 1** | **Year 2** | **Year 3** |
| Single entity Bidder/ Lead Member | | | | |
| Other Member of Consortium 1 | | | | |
| Other Member of | | | | |

| | | | | |
|---|---|---|---|---|
| Consortium 2 | | | | |
| Other Member of Consortium 3 | | | | |
| **Total** | | | | |

## 2. Experience Criteria

**2.1.** The Bidder shall submit the data and information along with the work order, completion certificate and reference on past performance etc. required to demonstrate that the Bidder meets the minimum criteria as per chart attached**.**

| Sl. No | Description of services | Qualification and Experience Criteria in Last 5 years ending on the deadline for bid submission |
|---|---|---|
| 1 | Similar Nature of Work | Service Provider firm should have satisfactorily installed, commissioned and maintained smart solution in the Parking facility to any Government, Local bodies or private places like Mall, Commercial spaces in India. In support of this, the Service Provider shall furnish a Certificate duly certified by the Competent Authority with the Technical Bid. |
| 2 | Work Experience | Service Provider firm should have carried out maintaininginstalled, commissioned and smart solution for minimum of 550 Four Wheelers capacity of the PARKINGthese criteriamay be considered for the multiple projects (PARKING) by adding up the total of all projects. |

- Details should be furnished along with performance letter & agreement copy.
- The bidder is to certify that he will be able to demonstrate that he will be able to manage PARKING

- If necessary, BBMP will inspect these PARKING to verify the claim of the bidders.
- International experience shall be valid if relevant certificates are attached.

**C. The bidder shall submit the Presentation covering the operation strategy based on the scope of work proposes by the client.**

[Location, Date]

## SECTION IV

## A. TECHNICAL PROPOSAL SUBMISSION FORM

From: To:

[Name and Address of Firm] **EXECUTIVE ENGINEER PROJECT WEST**
Sampige Road, Bhasyam park,
Bengaluru-20

Sir,

Subject:
"**Providing Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years.**

We, the undersigned, offer to provide the services for the above in accordance with your Tender dated *[Date],* and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal submitted under KPPP portal website.

If negotiations are held during the period of validity of the Proposal, i.e., before *[Date]* we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from contract negotiations.

We understand you are not bound to accept any Proposal you receive.
We remain,

Yours sincerely,

Authorized Signature:
Name and Title of Signatory:
Name of Firm:

Address:

## B. (DETAILS OF TURNOVER)

| Average Annual Turnover Proposal Submission Sheet | | |
|---|---|---|
| **Sl. No** | **Year** | **Turnover (Indian Rupees)** |
| 1 | 2021-22 | |
| 2 | 2022-23 | |
| 3 | 2023-24 | |
| 4 | 2024-25 | |
| | Average | |

## C. (DETAILS OF LITIGATION / ARBITRATION AND OTHER CLAIMS)

| Sl. No | Year | Name of the Employer | Matter of dispute | Disputed amount in Rs. | Whether the award was for or against the firm or pending |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Bidder must not hide any information regarding litigation or blacklisting otherwise legal action may be initiated in case of wrong information submitted by the bidder.

## SECTION V – SCHEDULE OF WORK

## A. Background

BBMP is desirous of obtaining services for "**Providing Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years.**

The site selected for parking system implementation is located in the K R Market Bengaluru city. PARKING is located at K R Market, Chamarajapete Constituency, Details of parking at PARKING are as below.

| **Number of Floors** | **Parking Capacity** | | **Total** |
|---|---|---|---|
| | Four Wheeler | TwoWheeler | |
| **1** | 200 | 400 | 600 |

Facilities and Amenities • Separate Entry and Exit • RCC Structure•Firefighting and safety measures • Pump Room and water storage tank.

## B. Scope of Work

The major civil works components are as follows:

| Sl. No | Description of Works Basement Parking Area | |
|---|---|---|
| 1 | New Cement Concrete Floor[Approximately 1 lakh sq. feet (10,000 sq. m)] | |
| | A | Excavation |
| | B | Wet mix |
| | C | Desilting of All Drains |
| | D | Seepage Treatment and Waterproofing of all walls |
| | E | Cement Concrete (M-30 Grade) |
| | F | Rumbles at 4 places with 5 lines |
| | G | Road studs |
| | H | Thermoplastic marking 2.5mm thickness |
| | I | Road direction |
| | J | CC drain (300 mm x 450 mm) |
| 2 | Existing Floor to be Converted to CC flooring with finishing[Approximately 1 lakh sq. feet (10,000 sq. m)] | |
| | A | Scarifying |
| | B | Wet mix |
| | C | Cement Concrete (M-30 Grade) |
| | D | Signage at all places |
| 3 | Culverts (4 no's) | |
| | A | Excavation |
| | B | PCC (M-5) |

| | | | |
|---|---|---|---|
| | C | NP 3 pipe (750 mm dia) |
| | D | Size stone masonry |
| | E | Coping concrete (M-15) |
| | F | Plastering 18 mm |
| | G | Pointing |
| | H | Painting |
| 4 | Entry and exist cement concrete road (M-35 grade) 100.00 m (Approximate length) | |
| 5 | 20 m width 4 lane cement concrete road (M-35 grade) from existing parking entry to gate (Approximate 175.00 m length and 20.00 m width) | |
| 6 | Underground drainage, Electrical and plumbing works | |
| 7 | Provision must be made available for installation of captive covered parking solar in future | |
| 8 | Providing Rooftop at Entry and Exit both ramps | |

Note:

1. Successful bidder must submit all the plan and estimate of the civil works along with specifications within 7 days of receiving Letter of Acceptance
2. All works shall be carried out only after taking approval of plan by the Engineer in-charge of work

1. Develop a user-friendly smart parking system that can be implemented in parking lots to ease parking hassles;
2. Display of availability of parking slot on real-time through web portal/parking App and optimization of parking lot occupancy.
3. Real-time update of entry & exit of vehicle, parking violations.
4. Generate revenues through enhanced efficiency and transparency.
5. Improved user satisfaction by saving time, effort & cost.
6. Availability of real-time data for analysis and business Intelligence for understanding consumer behavior, parking demand and supply.
7. To provide digital experience to the citizens.
8. Dissemination of emergency and critical information to mass in a fraction of second.
9. Leverage the platform to complement the mass notification strategy.

The solution shall include provisions for the following category of parking reservations:

a. **Category A: Walk-in parking**this category includes motorists who enter a parking lot without any prior booking. This category of motorists may be provided a QR Coded ticket, or any other advanced technology as deemed fit by Operator.

**ii. Category B: Online reservation for booking of a Parking Slot** Interested motorist will be allowed to book a parking slot in any of the parking lot through Mobile Application and Smart Web Portal. The user shall be charged for pre-booking a slot. If the motorist does not show up for one hour (time shall be adjustable as per requirement of BBMP) after the pre-booked time slot, the reservation can be reassigned. This category of motorists may be identified through a Unique Booking Number or a Quick Response (QR) Code or any other advanced appropriate technology as deemed fit by Operator.

**iii. Category C: Pass-based Parking (Monthly pass)**there will be a provision for users to buy monthly passes for Parking lots for hassle free experience. This category of motorists may be identified through a Unique Booking Number (UBN)/Near-Field Communication (NFC) enabled Smart Card, or any other advanced appropriate technology as deemed fit by the Operator.

a. **Category D:** Night parking from 10:00pm to 02:00 AmThe Operator has to run the parking lots at least from 8:00 hours to 24:00 hours. BBMP reserves the right to ask Operator to run any parking facility beyond 24:00 hours as per requirement. Motorists should be allowed to avail night parking services for their vehicles at designated parking lots. The Operator shall display information about the same at mobile app; web portal and LED display angels prominently.

## C. Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years

1. Provide and install necessary complete hardware and software solutions, such as but not limited to boom barriers, handheld devices, porta-cabin/workstation, switches, gateway, and guidance system, for parking system.
2. Provide Parking Management System and Parking Guidance System to direct and inform drivers regarding available parking slots through LED Signage and mobile app. Provide and install necessary infrastructure guidance to public regarding availability of parking spaces and other necessary information.
3. Installation of CCTV based surveillance solution for parking lots for monitoring of infrastructure, assets inside the parking and quick response to incidents in all parking lots.
5. Setup and maintenance of Central Control Room/helpdesk including Data Centre (preferably on cloud) with appropriate hardware and software for viewing, analyzing, storing and retrieval of the CCTV feed and monitoring and managing of Smart
6. Mobile App for parking services. App shall show the available slot on real time basis, booking of parking space, payment mechanism through various modes of payment, facility for extension of pre-booked parking space.
7. Comprehensive operation and maintenance of all hardware and software installed for this project throughout O&M period. To manage and collect revenue as per tariff fixed by BBMPfor all the parking lots defined in this TENDER
8. Unique identification of each vehicle entering any of the parking lots through bar coded tickets/ magnetic strip cards/ RFID/ Smart Cards/ QR Coded entry etc. as applicable
9. Provide recognition of each parking slot with LED indicators for Indoor parking showing availability of parking slot. Maintenance and up gradation of Parking Guidance & Management Infrastructure at 42 mentioned Parking locations. Using the data generated through the parking solution software for analytics purposes, such as time based (hourly/ daily/weekly/monthly/ annually) trends, area specific trends vehicle, specific trends, usage and vacancy periods, parking demand etc. for the purpose of better management of parking.

a. **SKETCH SHOWING THE PARKING LOCATION. (PLEASE REPLACE with K R MarketPARKING MAP)**

**ProposedPar**

## 1. Schedule of Work

The Tenderer shall perform the principal services outlined below as a part of responsibility for the services of the work. They shall provide the qualified professional staff with relevant experience to carry out the assignment. The Services will include but not limited to the following:

- The Service provider/ bidder should go through the Technical Requirements & Specifications attached at the end Annexure-H before participating in this Tender.
- The Service provider should check the location of the Parking building to ensure himself that all the criteria are looked into before applying/participating for tender.
- The Service Provider should install all the required Hardware, Software & other equipment's at the parking locations within a period of six months'time from the date of handing over of site/work order (Commencement Order).
- Maintain and manage all hardware, software and services covered in this TENDER document throughout the contract period.
- The bidder shall carry out necessary electrification and networking work for all Development, Operation &Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years devices/equipment, such as LED signage's including sensors, boom barriers, handheld device, manual pay station, CCTVs, Central Control Centre, built / installed under this TENDER document including operation & Maintenance for the contract period.

- Watch and ward of the assets/services created in this project. The Operator has to

replace the material(s) / equipment(s) /device(s) in case of any theft or loss due to any other reasons, which affects the services/assets under this project.

- To provide FTTH /RF/Wi Fi connection at each of the parking lot to bring (i) parking related data on real-time basis; and (ii) CCTV data on demand basis, online to the Central Control Room throughout the Contract period of project, at his cost
- Erect suitable steel structures if required at its own cost for installation of LED signage for smart parking system. These structures/ poles shall be of stainless steel, and aesthetically designed and structurally stable and as per BBMP specifications. The Operator shall also indemnify BBMP for any damage due to such structures.
- The Contract Period of 10 years shall be extended by additional 5 years based on performance and mutual consent.
- Provide adequate power back up to ensure uninterrupted power supply to all hardware (equipment, devices, etc.) covered under this TENDER document.
- Service Provider, with concurrence of client shall convene periodical meetings between different divisions of BBMP to discuss, prepare and finalize collection programmed prior to the commencement of work.
- BBMP shall furnish for the use of the Service Provider all necessary data as required for setting out of all permanent and temporary works.
- BBMP shall inspect and evaluate all Service Provider's installations, to ensure compliance with the terms and conditions of contract.
- Service Provider shall study all drawings, Contract Agreement, Specifications etc. and ensure implementation at site.
- The Service Provider's representatives shall be responsible for overall monitoring of the parking activity in the said site and shall be available at site everyday (including nights in shifts)
- Service Provider shall be responsible to deploy requisite number of qualified and experienced personnel (including the operating staff for Fire safety, Public Address & Alarming System) at site on full time basis to supervise the day-to-day activity of parking and also shall be responsible for monitoring of the vehicles movement as per specifications and standards.
- Clientshall ensure that all instructions to the Service Providers will be issued in the form of letter written by officer in charge to the Service Provider or site instructions to the Service Provider written by officer in charge or his representative in site instructions book. They shall maintain the record of all such instructions for verification at every time.
- Service provider shall ensure services for the parking of the vehicle, collection of prescribed & displayed parking fee, Management of traffic within the parking area, arrangement of security personnel round the clock for security purposes of men and vehicles are provided.
- Service provider shall ensure that no illegal/obnoxious activities etc.,are carried out at the PARKINGby controlling the entry and exit of the vehicles after a thorough scientific check.
- Service provider should install Public Address System, CCTV cameras for the purpose of safety & security check, in coordination with Building Contractor before actually commencing the parking services.
- PARKING CHARGES (excluding GST& all other taxes) to be collected should not exceed the below mentioned Rates. The Parking rates shall be reviewed with BBMP after every yearand rates may be revised accordingly.

| **Sl.No.** | **Duration (hours)** | **Parking Charges - Two Wheelers (INR)** | **Parking Charges - Four Wheelers (INR)** |
|---|---|---|---|
| 1 | 0 to 1 | 15 | 25 |
| 2 | 1 to 2 | 25 | 45 |
| 3 | 2 to 4 | 45 | 85 |
| 4 | 4 to 6 | 65 | 125 |
| 5 | 6 to 8 | 85 | 165 |
| 6 | 8 to 10 | 105 | 205 |

| | | | |
|---|---|---|---|
| 7 | 10 to 12 | 125 | 245 |
| 8 | 12 hours to 24 hours | 175 | 275 |
| 9 | Monthly pass charges per car is Rs. 5000 (Car Registration Number and validity has to be mentioned on the Pass) | | |
| 10 | Monthly pass charges per Two-Wheeler is Rs. 1500 (T/W Registration Number and validity has to be mentioned on the Pass) | | |

- The service provider shall not modify or damage any part of building & fully responsible for any damages, losses etc. Any damage to other services arising due to installation or execution or repair or maintenance work by the Operator, shall have to be made good by the Operator within 72 hours of such damage. BBMP is in no way responsible for such damage/losses.
- The parking area (PARKING) should be kept open for 24x7 with proper security personnel.
- Documentation of all events by providing CCTVs for security purpose and related matters during the period, which has to be shared to BBMP on every month.
- BBMP shall provide time assistance and directions to the Service Provider in all matters related to the interpretation of the Contract.
- House-Keeping Services: The service provider shalldeploy staff to manage the up-keep and housekeeping for, and to take care of cleaning of the Parking Facilities.
- Maintenance Services: To provide manpower support to take care of preventive maintenance.
- Service provider should disburse salaries/payments/DA/VDA/ESI/PF to its employees as per relevant labor laws & other applicable law /rules. Deposit the requisite benefits to concerned departments like, ESI, PF, etc. in time. All details to be submitted to BBMP every month.
- Safety of the building, vehicles, people including its employees during the period of contract is the sole responsibility of Service Provider. Any damage/injury shall be repaired/compensated at Service Provider’s own cost.
- The integrated data available from all software applications from parking solution proposed should be available in a central database on a central server located at BBMP data center. The data should be stored in such a way that whenever required it can be queried and made available in report format.
- Procurement, installation, configuration, Operating System, Database Licenses, hardening of server infrastructure (e.g. CPU, operating system, RAM, storage, etc.) that will host the software application should be provisioned by the service provider. BBMP will provide only necessary rack space at BBMP Datacenter. Necessary network infrastructure within BBMP Datacenter will also be provided by BBMP. The hardware infrastructure should be able to sustain required load and should support all functional as well as non-functional requirements.
- Service Provider should ensure submission of security audit certificate and security audit reports for the developed portal, Mobile App and other software. The audit has to be carried out by any of the Agencies like ST&QC, ETDC, CERT-In, Min of Electronics & Information Technology (GOI) or any other Agency which BBMP decides.
- Service provider has to install a kiosk (cabin)at the entry and exit of the PARKING to facilitate the ticket issuer to operate.
- The service provider is permitted to install EV charging station facility to be built at own cost by Parking vendor.
- Bidder will be responsible for maintenance of the systems/devices/equipment/work carried out as part of this TENDER throughout the contract period.
- The Bidder will be responsible for all civil and installation work related to network connectivity, power supply extensions to devices, installation of devices and equipment, and any other networking, communication, and infrastructure requirements related to any work under this TENDER document.
- Service provider shall provide adequate battery bank/UPS to ensure uninterrupted power supply to all hardware (equipment, devices, etc.) covered under this TENDER

document.

- Informative Display Panels should be installed at all entry points (every floor in case of multilevel car park) of the parking lot indicating available spaces for each parking level, total parking and should be able to be customized by software. The display panel should be easy to understand and must have graphical directional and zone status indication (as red crosses for zone full or green directional arrows to guide drivers to zones with available spaces).
- The Parking Management System should retain videos of car entering/exiting the parking zone for a period of three Months at any point of time.
- User shall have the multiple payment options as given below.
    - Primary mode of payment for parking will be by cash at the Pay Station
    - FASTag, Payment Card (ATM / Debit / Credit Card)
    - UPI mode of payment such as Paytm, GPay, PhonePe, Whatsapp pay or any other UPI payment method.
    - RFID tags (Future state requirement, solution should have RFID natively integrated and shall only require additional hardware to make it fully functional)
- Service Provider should remit the bid amount& other payments like Penalties, Cost of repairs to Damages, etc., to BBMP in the form of DEMAND DRAFT drawn in favor of Chief Commissioner, BBMP, Bengaluru, payable at Bengaluru.
- Service provider may provide car parking space on a monthly basis to businesses in the automobile sector.
- If the Service Provider fails to perform as per the terms & conditions or fails to pay the above amount/Charges even after THREE REMAINDERS it may be noted that tender will be terminated and the damages/arrears will be recovered at risk and cost of the Service Provider from the Performance Security deposit amount.
- Service Provider shall carry out joint inspection with BBMP before the end of Contract period and take remedial measures for defects discovered if any, and to correct them and handover the site in correct manner back to BBMP.
- Liquefied Petroleum Gas: The use of LPG or any other combustible material is not permitted in the building.
- Service provider is permitted to install hydraulic parking equipment at a suitable area in the parking premises.
- Should ensure that all doors/fixtures are maintained in functional condition, particular attention must be paid to self-closing fire smoke check doors and automatic fire/doors/rolling shutters/gates.
- Should ensure that all Firefighting, Plumbing, electrical and mechanical service equipment’s are operated &maintained in good working condition at all times with qualified technicians. Annual Maintenance Contract with reputed Agencies (Govt. certified) can be entered at their own cost of Service Provider for maintenance of such specialized services with due approval of BBMP.
- The installed Parking management equipment and related software are to be periodically checked and verified by BBMP IT office or any other agency suggested by BBMP.
- Service provider shall carry out all routine & periodical maintenance activities as per the National Building Code, Indian Standard Codes, Maintenance Manuals, Latest updated Orders/ circulars, etc. of Fire Fighting, Plumbing, electrical and mechanical service equipment’s. In case of any damage or repair to any of aboveequipment/ pipes, it has to be repaired by the Service Provider at his own cost & restore the facilities within 3 days.
- Should maintain all the equipment like Wet Riser, Down Comer, Hose Reel drill, Automatic Sprinkler System, Yard Hydrant, U.G. Tank with Draw off Connection, Fire Pump, First Aid Fire Fighting Appliances, Auto Detection System, Manual operated Electrical Fire Alarm System, Public Address System with talk back facility, Fire Man Switch, Hose Boxes with Delivery Hoses and Branch & all other equipment, etc.
- Service Provider is permitted to obtain any other civic facility like Water, Internet,

etc. from the concerned departments by paying the requisite fee. The usage charges have to be borne by Service Provider.

- Service provider has to provide minimum five-year warranty on the all equipment provided for the services as prescribed in this tender & maintain the same till the end of Contract period.
- BBMP shall make necessary arrangement to notify and enforce No Parking within 2 km. radius around the PARKING in consultation with local traffic police authorities. BBMP shall coordinate with the traffic police authorities for the same. BBMP shall install No Parking signage across the said No Parking zone around the PARKING.
- The EMD and Performance security amount will return to service provider after end of contract period.
- Ensure that two-wheelers/four-wheelers have seamless access (Entry/Exit) & are parked systematically in neat rows. It is advisable to mark parking lines on the ground in the parking areas in the building including basements with proper numbering with sensors. A parking attendant must ensure that vehicles are parked in an orderly manner and that the vehicles do not encroach upon the open space surrounding the building/fire drive way.
- Marking & numbering have to be clearly visible on each slot of vehicle in the PARKING Bays for accountability.
- Smoking Restrictions: Smoking shall be prohibited throughout the building.Easily readable “NO SMOKING” signage must be conspicuously posted at locations where they can catch the eye. Each sign must also include a pictograph with illumination.
- Service provider is permitted to display all types of advertisements within or outside or on compound wall of the PARKING.
- Storage of flammable substances, such as diesel oil, gasoline, motor oils, etc. is not allowed anywhere within the PARKINGbuilding.
- Use of candles, Lanterns or other naked light flame must be forbidden throughout the building.
- A satisfactory supply of water exclusively for the purpose of firefighting shall always be made available in the underground static storage tank. To prevent stagnation of water in the static water tank the suction tank of the domestic water supply shall be fed only through an over flow arrangement to maintain the level therein at the minimum specified capacity
- Service provider is permitted to enter into an agreement or form a joint venture with the Electric Vehicle manufacturers/EV charging developer or any such providers to establish EV charging stations at the PARKING for the benefit of the motorists using electric vehicles visiting the PARKING.
- Service provider is deemed to have obtained NOC from BBMP to request BESCOM for the required electricity connection at a discounted price to establish and operate EV charging stations at the PARKING. Service provider shall be responsible for the charges/fees to be paid to BESCOM for the said purpose. Such facilities shall be made available to the service provider by the client.
- Control room:Service provider shall establish a control room, with communication system (suitable public address system), to all floors and facilities for receiving the message from different floors. Details of all floor plans along with the details of firefighting equipment and installation shall be maintained in the control room at all times. CCTV monitoring system displaying visuals of all floors shall be installed in control room for security purposes.
- Fire drills and fire orders: The guidelines for fire drill and evacuation etc. as per National Building Code (NBC) have to be adhered to. The periodical inspections & NOC has to be obtained from Karnataka Fire &Emergency authority from time to time at his own cost.
- Provision of Automatic Number Plate Recognition/License Plate Recognition (LPR):License Plate Recognition system consisting of a “frame-grabbing instrument” capable of capturing an image, searching for a number plate’s position within the image, and subsequent singling out of the relevant symbols with the aid of optical character reading (OCR) tools, which translate the image pixels shall be provided. Also, the LPR should be Web-based software product for vehicle license plate recognition from various video sources, such as IP cameras, video files, video

capture devices and custom video sources (plugins). The fast and stable LPR engine provides accurate plate detection from real-time video with resolution up to 1920x1080 (Full HD) and it should be supporting Indian plate formats. The data to be retained, not to disclose the privacy and to be shared only with BBMPevery month without any extra cost.

- Payment mode for parking charges:Cash payment method, online mode of payment,FASTag, App based mode of payment options should be provided to parking consumers for making payment to parking fee.
- Vehicle parking info Web: The Web portal should be developed and adopted. Web support should give the data that exists on web of all car parking information and it shall be able to extract like Data import, Data export, Data Privacy, Data storing, etc. This data should be retained, not to disclose the privacy, to be shared only with BBMP every Month.
- Crime Prevention Techniques: Service provider shall ensure that no criminal activities happen inside thePARKING premises. Service provider is fully responsible and shall take all measuresto prevent any such activity from happening. Service provider shall be responsible for and provide security at the parking site, and shall at the earliest possibility report any such crimes in parking site to Police and BBMP without fail.
- Pre-Booking/Seasonal parking:Depending upon the need, facility for pre-booking in the seasons like daily basis/weekly basis/monthly basis (Pass)/holidays shall be adopted with latest online facilities and manual/app-based facility.
- Service Provider should satisfy himself with the Equipment/Machineries/Assets present in the building as per AS-BUILT drawings& take over the custody.
- The Operator shall integrate the parking mobile app and portal on the BBMP Command & Control Centre and migrate the whole content/database of app. The Operator shall also integrate the parking mobile app and the web portal with the BBMP App as and when such app is launched by the BBMP by itself or through any other Operator.
- Mark all the boundaries of each parking slot in all the parking lots under this tender document with thermoplastic paint of 2.5 mm thickness and 100mm width as per PWD specificationsand renew/remark the same after every 2 years or earlier as per site requirement at his own cost.
- The operator shall be responsible for any theft/damage/loss of vehicles parked in parking lots and shall be responsible for settlement of the dispute, if any, including under the Court of Law, and also follow all instructions and guidelines issued by Police/statutory rules & regulations/ BBMP for prevention of misuse of parking lots, including usage by anti-social elements, terrorist(s) etc.
- Undertake all measures for Cyber security, protection of information and communication technology systems of this project from cyber-attacks that are purposeful attempts by unauthorized persons to access ICT systems in order to achieve the target of theft, disturbance, damage, or other illegal actions.
- The Operator shall detect, analyze and mitigatevulnerabilities and protect control room including Data Centre from cyber-attacks throughout the Contract period.
- Service provider shall propose additional measures to increase occupancy of parking lots. Service provider shall take measures to provide value-added services to the customers at the PARKING at additional charges.
- The operator is not allowed to sublet the parking site under this tender. However, the operator can arrange manpower from any source.
- The operator shall inform the BBMP in writing, list of all the assets (details of equipment, software’s, services etc.) deployed in the parking facility under this TENDER document, including their costs. The operator shall update such assets list on yearly basis throughout the Contract period.
- Functional, technical requirements & specifications of equipment to be installed by service provider at PARKING shall be provided to BBMP.
- The services of key personnel shall be available full time during the entire contract period from commencement of work and up to settlement of final claims of the contracting agency. Curriculum Vitae (CV) recently signed by the proposed key professional staff and also by an authorized official of the Consultancy Firm

shall be scanned and uploaded along with the Technical Bid.

## 2. SPECIFIC RESPONSIBILITIES OF THE TENDERER

### 1. Documents

The BBMP shall provide to the Service Provider, the copies of all data & reports available which are considered relevant to the execution of Service Provider's work and liaison with other departments for access of information and data.

### 2. Liaison and Access

The BBMP shall provide liaison with other Government agencies and Departments for only the introduction of the Service Provider. BBMP will only coordinate with Service Provider for arranging unhindered access to the relevant agencies / Departments in order to complete the task successfully.

### 3. Schedule for completion of tasks.

The Contract services shall be for 10 years which may be extendable up to a period of another 5years or so as required by BBMP based on performance and mutual consent.

### 4. Payments to BBMP

Payments to the BBMP will be made in accordance with Section VI, GCC clause 13 and will be subjected in all respects to the terms and conditions of the Agreement. No party other than the supplier shall derive any rights from the Agreement.

### a. Non-performance of Services – levying of penalty & termination

For nonperformance of services a penalty will be levied on the service provider at minimum 0.1% per day on annual bid amount. Further, the contract will be terminated and the damages, arrears will be recovered at risk and cost of the Service Provider from the deposit amount.

Total failure on the performance of services will render forfeiture of the Performance Security Deposit and action will be initiated as per Conditions of Contract.

## 4. OBLIGATIONS OF THE CLIENT

### 5.1 Documents

The BBMP shall provide the Service Provider with copies of all data and reports available which are considered relevant to the execution of Service Provider's work and liaison with other departments for access of information and data

### 5.2 Liaison and Access

The BBMP shall provide liaison with other Government agencies and Departments for the introduction of the Service Provider. The Service Provider shall be given unhindered access to the relevant agencies / Departments in order to complete the project successfully.

**5.3 DISPUTES, IF ANY:** Dispute if any, between the client and the Service Provider, the decision of the Chief Commissioner, BBMP, Bengaluru is final and binding on both the Client and Service Provider.

## SECTION VII – SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

| Sl.No. | Special Conditions of Contract |
|---|---|
| 1 | Upon installation of the Equipment the Successful bidder shall notify BBMP and send the following documents to BBMP:<br><br>3 copies of the Successful bidder's invoice showing the description of the equipment quantity, unit price, and total amount;<br><br>(a) Manufacturer's or Supplier's warranty certificate;<br>(b) Inspection certificate issued by the Govt or BBMP nominated inspection agency, and<br>(c) Certificate of origin.<br>(d) Receipt of Equipment from the authorized officer by Commissioner of BBMP along with details of stock entry in BBMP.<br>(e) Physical inspection report of authorized officer of BBMP. |
| 2 | For Installation of smart solutions in PARKING Third party inspection by Govt. Authorized Quality inspection agencies will be done. |
| 3 | Payment of the Contract Price shall be made in the following manner as per the Section VI GCC clause 13. |
| 4 | The currencies for payments shall be Indian Rupees (INR) |
| 5 | The BBMP shall not be responsible for any of the taxes, duties and levies imposed on Successful bidder. |
| 6 | The Successful bidder shall provide a Performance Security of Rs.22Lakhsfor a period of 10 years additional 6 months of O&M period. The Performance Security shall be denominated in Indian Rupees only. |
| 7 | The types of acceptable Performance Securities are:<br>A Bank guarantee or irrevocable Letter of Credit, issued by a Nationalized/Scheduled bank in the form provided in the tender documents or another form acceptable to the BBMP or<br>A cashier's check or Banker's certified check, or crossed demand draft or pay order drawn in favor of the BBMPor<br>Specified small savings instruments pledged to the BBMP. |
| 8 | Discharge of Performance Security shall take place:<br>The performance security for the average annual O & M cost valid for 10years and additional 6 months of O&M period shall be submitted by the bidder, which will be retained by BBMP up to the successful running of PARKING along with the smart solution for contract period. |

| | |
|---|---|
| 9 | (a)The Successful bidder, BBMPappointed Third Party agency may jointly conduct inspections and testing of the Equipment s before installation to BBMP. All costs involved in arranging and performing of such inspections and tests shall be borne by the Successful bidder (b) The Successful Bidder, BBMP shall jointly conduct final inspections and testing of the equipment after delivery to prior to acceptance of the Equipment. |
| 10 | Tests and Inspections shall be carried out at the specified times or milestones |
| 11 | The BBMP may require witnessing, prior to award of contract, the demonstration at any of the site where the bidder had claimed for experience. The bidder has to make necessary arrangements for such demonstration at the selected site. |
| 12 | The liquidated damage shall be: 0.1% of the annual contract amount of delay or part thereof. |
| 13 | The maximum amount of liquidated damages shall be: 10% of the monthly service fee. |
| 14 | The period of validity of the Warranty shall be: 5 years from date of commencement of contract. |
| 15 | The amount of aggregate liability shall be: Equal to contract price. |
| 16 | A period of 6 months will be allowed to the tenderer as installation period for facilitating the parking area. |
| 17 | No Parking will be enforced2 km radius around K R MarketParking by BBMP. |
| 18 | The service provider is permitted to install EV charging station facility to be built at own cost by Parking vendor. |

**Arbitration (Clause 24)**

4.1 The procedure for arbitration shall be as follows:

(a) In case of dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement it shall be settled in accordance with the Arbitration and Conciliation Act 1996. The disputes or differences shall be referred to a Sole Arbitrator. The Sole Arbitrator shall be appointed by agreement between the parties; failing such agreement, by the Appointing Authority (any one of the Organizations as per list enclosed in Annexure)
(b) Arbitration proceedings shall be held at……. ……, Karnataka state ( to be filled in by the Employer before issue of the Tender Documents),
(c) The cost and expenses of arbitration proceedings will be paid as determined by the Arbitrator. However the expenses incurred by each party in connection with the preparation, presentation, etc., shall be borne by each party itself.
(d) Performance under the contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

- In the case of the death of a Contractor after executing the agreement / commencement of the work, his legal heir, if an eligible registered Contractor and willing can execute and complete the work at the accepted tender rates irrespective of the cost of the work.

- The Contractor shall produce invoice for procurement of bronze with work bills. No payments will be made without such invoices.
- The Contractor shall execute the work in minimum two shifts (Day & Night) for speedy completion of work and to minimize inconvenience to public.
- If the Contractor does not satisfy clause 3.2 (c) of conditions of contract he shall provide a Memorandum of Understanding with an artist who has executed similar nature of work in any government projects previously.
- The Contractor should have his own arrangements for Quality Control / Quality Assurance of the whole work.
- Tenderer should have registered with EPF and ESI authorities; certification should be produced to BBMPbefore entering in to the Agreement.

*[ Add other Clauses specific to the work for which tenders are invited.]*

# SECTION VIII - CONTRACT FORMS

## Annexure 1- Performance Security

1. Performance SecurityProviding Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years.

Invitation for Bid No.: _____ Date: (Insert date)

**To,**
**Executive Engineer,**
Office of Executive Engineer PROJECT WEST,
Sampige Road, Bhasyam Park,
Bengaluru-560020 .

**WHEREAS** [insert complete name of Successful bidder] (hereinafter "the Successful bidder agency") has undertaken, pursuant to Contract No. [Insert number] dated [insert day and month], [insert year] by Installing necessary Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years. [brief description of the Services] (Hereinafter "the Contract").

**AND WHEREAS** it has been stipulated by you in the aforementioned Contract that the Successful bidder shall furnish you with a security [insert type of security] issued by a reputable guarantor for the sum specified therein as security for compliance with the Successful bidder's performance obligations in accordance with the Contract.

**AND WHEREAS** the undersigned [insert complete name of Guarantor], legally domiciled in [insert complete address of Guarantor], (hereinafter "the Guarantor"), have agreed to give the Successful bidder a security:

**THEREFORE WE** hereby affirm that we are Guarantors and responsible to you, on behalf of the Successful bidder, up to a total of [insert currency or currencies and amount of guarantee in words and figures] and we undertake to pay you, upon your first written demand declaring the Successful bidder to be in default under the Contract, without cavil or argument, any sum or sums within the limits of [insert currency or currencies and amount of guarantee in words and figures] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein. -

This security is valid until the [insert day, month, and year]. **Name [insert complete name of person signing the Security]**

In the capacity of [insert legal capacity of person signing the Security]

**Signed [**insert signature of person whose name and capacity are shown above]

Duly authorized to sign the security for and on behalf of [insert seal and complete name of Guarantor] Date [insert date of signing]

## Annexure 2 - Structure and Organization

Details of organization of Individual Agency/ consortium to be submitted

1. (a) Name:

   (b) Country of incorporation:

   (c) Address of the corporate headquarters and its branch office(s), if any, in India:

   (d) Date of incorporation and/ or commencement of business:

2. Brief description of the Company including details of its main lines of business and proposed role and responsibilities in this Package:

3. Details of individual(s) who will serve as the point of contact/ communication for the Authority:

   (a) Name:

   (b) Designation:

   (c) Company:

   (d) Address:

   (e) Telephone Number/mobile number:

   (f) E-Mail Address:

   (g) Fax Number:

4. Particulars of the Authorized Signatory of the Bidder:

   (a) Name:

   (b) Designation:

   (c) Address:

   (d) Phone Number:

   (e) Fax Number:

5. In case of a Consortium:

(a) The information above (1-4) should be provided for all the Members of the Consortium.

(b) A copy of the Memorandum of Understanding, as envisaged in **Clause 2.2.11 (f)** should be attached to the Bid.

(c) Information regarding role of each Member should be provided as per table below:

| Sl. No. | Name of Member | Role* {Refer Clause 2.2.11 (d)} |
|---|---|---|
| 1. | | |
| 2. | | |

* *Member Code shall indicate NA for Not Applicable in case of a single entity Bidder. For other Members, the following abbreviations are suggested viz. LM means Lead Member and OM means Other Member.*

(d) The following information shall also be provided for each Member of the Consortium:

Name of Bidder/ member of Consortium:

| No. | Criteria | Yes | No |
|---|---|---|---|
| 1. | Has the Bidder/ constituent of the Consortium been barred by the Central/ State Government, or any entity controlled by them, from participating in any project (BOT or otherwise). | | |
| 2. | If the answer to 1 is yes, does the bar subsist as on the date of Bid. | | |
| 3. | Has the Bidder/ constituent of the Consortium paid liquidated damages of more than 5% of the contract value in a contract due to delay or has been penalized due to any other reason in relation to execution of a contract, in the last three years? | | |

6. A statement by the Bidder and each of the Members of its Consortium (where applicable) disclosing material non-performance or contractual non-compliance in past projects, contractual disputes and litigation/ arbitration in the recent past is given below (Attach extra sheets, if necessary)

Signature of the Applicant

Seal:

## Annexure 3 - Key Personnel

Details of key technical and Administrative Personnel with the applicant and those that would be assigned to the work.

| | | | |
|---|---|---|---|
| A. | Details of the Board of Directors / Partners | | |
| | a) | Name of the Director / partner | |
| | b) | Organization | |
| | c) | Address | |
| | d) | Remarks | |
| B. | Key Technical and administrative personnel / Authorized signatory | | |
| | a) | Individual’s name | |
| | b) | Qualifications | |
| | a) | Present position of office | |
| | b) | Professional experience and details of works carried out | |
| | a) | Year with the applicant | |
| | b) | How the individual would be involved in the contract | |
| C. | Remarks. | | |

Signature of the Applicant

Seal:

## Annexure 4

## A. Details of related works completed for the last three years

| | | |
|---|---|---|
| 1 | Name of work | |
| 2 | Order placed by (Full address of Client) | |
| 3 | Order No and date | |
| 4 | Total tendered cost of work | |
| 5 | Brief description of related works including principal features and quantities of main items | |
| 6 | Period of completion | |
| | a) Originally stipulated time limit | |
| | b) Extended time limit | |
| | c) Actual time taken to complete of work in stipulated time limit / extended time limit | |
| | d) Reasons for non- completion of work in stipulated time limit /extended time limit | |
| 7 | Name of applicants Engineer –in charge of the work | |
| 8 | Were there any penalties /fines /stop notices /compensations/ liquidated damages imposed? (yes/No)(if yes ,give amount and explanation) | |

Signature of the Applicant

Seal:

## 1. Format for Certificate of Experience:

*(On the Letterhead of the Concerned Agency)*

Date:

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that _____ (name of the Bidder(s) has carried out the following activities as part of its services towards ___ during the period _____ and _____.

The details are as listed below:

i. Installation of Smart solution for parking system
ii. No of PARKINGs Operated and Maintained

This certificate is being issued to be produced before BBMP("BBMP"), for the Project for ForProviding Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years.

Signature and Seal of the
Authorized Signatory of the Agency

## Annexure 5 - Financial Statement

Information regarding financial standing of the applicant.

(In Rs. )

| Bidder type | Annual Turnover for past Five years | | | | |
|---|---|---|---|---|---|
| | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Single entity Bidder/ Lead Member | | | | | |
| Other Member of Consortium | | | | | |
| **Total** | | | | | |

## Name & address of Bidder's Bankers:

Any Bidder consisting of a single entity should fill in details as per the row titled Single entity Bidder and ignore the rows titled Consortium Members. In case of a Consortium, row titled Single entity Bidder may be ignored.

## Instructions:

1. Bidder shall submit the Turnover details.
2. The Bidder/ its constituent Consortium Members shall attach copies of the balance sheets, financial statements and Annual Reports for the latest financial year preceding the Bid Due Date. The financial statements shall:
   (a) Reflect the financial situation of the Bidder or Consortium Members;
   (b) Be audited by a statutory auditor/chartered accountant in case of individuals, registered sole proprietorship firm and registered partnership firm;
   (c) Be complete, including all notes to the financial statements; and
   (d) Correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
3. Year 1 shall be the latest completed financial year, preceding the Bid Due Date. Year 2 shall be the year immediately preceding Year 1 and so on. In case the Bid Due Date falls within 3 (Three) months of the close of the latest financial year.
4. The Bidder shall provide an Statutory Auditor's Certificate/Chartered Accountant specifying the Turnover of the Bidder and also specifying the methodology adopted for calculating such net worth/turnover in the format given below.
5. For the purpose of the TENDER, Annual Turnover shall mean:
   The total revenues as indicated in the audited annual statements.
6. Experience (Technical Capacity and Financial Capacity) of only the Bidder(s)/Members of consortium would be considered shall be considered. Experience of associate company/parent company/ subsidiary company shall not be considered for qualification purposes.

The Bidder shall provide an Auditor's Certificate specifying the turnover of the Bidder and also specifying the methodology adopted for calculating such turnover.

Signature of the Applicant

Seal:

## Annexure 6 - List showing relative of the applicant working in BBMP

| Sl. No. | Name of Employee | Relationship with the applicant | Name of the Relation who are near relatives to Officers mentioned in col. 2 | Remarks |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| | | | | |
| | | | | |

Signature of the Applicant

Seal:

## Annexure 7 - Information regarding Anti-Blacklisting - Affidavit

**(On a Stamp Paper of value of Rs.500)**

I, M/s. ..... (Single Business Entity / Lead Member/ Other Member/s), (the names and addresses of the registered office) hereby certify and confirm that we or any of our promoter/s / director/s are not barred by BBMP("BBMP") / any other entity of Government of Karnataka or blacklisted by any state government or central government / department / urban local body / agency in India from participating in bidding process, either individually or as member of a Consortium as on the _____(Bid Due Date).

We further confirm that we are aware that our Proposal for the Assignment would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this TENDER at any stage of the Bidding Process or thereafter during the agreement period.

Dated this .....Day of ....., 20....

Name of the Bidder

Signature of the Authorised person

Name of the Authorised Person
*To be executed separately by all the Members in case of Consortium*

***[Notary Seal and Signature]***

## Annexure 8 : Power of Attorney for Signing of Bid
## (On a Stamp Paper of value of Rs.500)

Know all men by these presents, We..... (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr/ Ms (name), ..... son/daughter/wife of ..... and presently residing at ....., who is presently employed with us/ the Lead Member of our Consortium and holding the position of ..... , as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Bid in respect of the Assignment provided in Letter of Bid for the Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years(hereinafter referred to as BBMP) including but not limited to signing and submission of all Bids, bids and other documents and writings, participate in the Bidding Process and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority , signing and execution of all contracts including the Agreement and undertakings consequent to acceptance of our bid, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our bid for the said Assignment and/ or upon award thereof to us and/or till the entering into of the Agreement with the Authority .

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, ....., THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF ....., 2.....

For .....

(Signature, name, designation and address)

Witnesses:

1.

2.

(Notarised)

Accepted

..... (Signature)

(Name, Title and Address of the Attorney)

Notes:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
- Wherever required, the Bidders should submit for verification the extract of the charter documents and documents such as a resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and not arised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Appostille certificate.

## Annexure 9: Power of Attorney for Lead Member of Consortium

(On a Stamp Paper of value of Rs.500)

Whereas the BBMP("BBMP") has invited Bids from interested parties for Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years ("the Assignment").

Whereas, ……., ……., and ……. (collectively the "Consortium") being Members of the Consortium are interested in bidding for the Assignment listed in Letter of Bid in accordance with the terms and conditions of Request for Proposal (TENDER) and other connected documents in respect of the Assignment, and

Whereas, it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and the Authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's bid for the Assignment and its execution.

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS

We, _____ having our registered office at _____, M/s. _____, having our registered office at _____, and M/s. _____, having our registered office at _____, [the respective names and addresses of the registered office] (hereinafter collectively referred to as the "Principals") do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s _____, having its registered office at _____, being one of the Members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the "Attorney") and hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the Bidding Process and, in the event the Consortium is awarded the Right/ Contract, during the execution of the Assignment, and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the submission of its Bid for the Assignment, including but not limited to signing and submission of all applications, Bids and other documents and writings, participate in Bidders' and

other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the Bid of the Consortium and generally to represent the Consortium in all its dealings with the Authority, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium's Bid for the Assignment and/ or upon award thereof till the Agreement is entered into with the Authority.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF .....20__

For _____
(Name & Title)
For _____
(Name & Title)
For _____
(Name & Title)

Witnesses:
1
2

(Executants)
(To be executed by all the Members of the Consortium)

Notes:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
- Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the powers of Attorney provided by the Bidders from countries that have signed the Hague Legislation

Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.

## SECTION IX

### Non Performance Standards and Liquidated Damages

The Performance Standards and Corresponding Liquidated Damages is listed in the table below Liquidated Damages are over & above the non-performance deductions.

| Sl. No | Performance Indicator | Performance Standard | Method of Measurement | Frequency of Measurement | Liquidated Damages | Remarks |
|---|---|---|---|---|---|---|
| 1 | **Nonperformance of PARKING more than a week.** | 100% | No. of days | Daily | 0.1% Per day of annual contract amount | Maximum Liquidated damages is 10% of annual contract amount. The contract gets terminated if Liquidated damages |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | exceeds 10% of annual contract amount. |

# SECTION X Price BID

**(TobesubmittedinFinancialbid Online only)**

FROM:(NameofServiceProvider) TO:Executive EngineerPROJECT WEST Division,BBMP

**Name of work**: Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years

We, the undersigned, offer to provide the services for "Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years" in accordance withyour Request for Proposaldated *[Date],* and our Proposal (technicalandFinancialProposals).Ourattachedfinancialproposalis as below. *(including GST & all* othertaxes].

| **Sl .No.** | **Nameofthework** | **Payment schedule asper**BBMP | | | |
|---|---|---|---|---|---|
| | | **Contract Period** | **Minimum Annual Amount Fixed (INR)** | **AnnualBidAmount to be quoted (INR)** | |
| (1) | (2) | (3) | (4) | (5) In Figures | (6) In Words |
| 1 | Providing development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years. | 1st year from the date of Commissioning | 4000000 | | . |
| | | 2nd year | 4000000 | | |
| | | 3rd year | 4000000 | | |
| | | 4th year | 4000000 | | |
| | | 5th year | 4000000 | | |
| | | 6th year | 4200000 | | |
| | | 7th year | 4410000 | | |
| | | 8th year | 4630500 | | |
| | | 9th year | 4862025 | | |
| | | 10th year | 5105126 | | |

Our financial proposal shall be binding upon us subject to the modifications resulting fromcontractnegotiationsup toexpirationofthevalidityperiodoftheProposali.e.,*[Date].*

We undertake that, in competing for (and, if the award is made to us in executing) the abovecontract, we will strictly observe the laws against fraud and corruption in force in India namely"PreventionofCorruptionAct1988".

We understand you are not bound to accept any Proposal you receive.

Weremain,
Yourssincerely,

AuthorizedSignature:
NameandTitleofSignatory:
NameoftheServiceProvider:
Address:

**Note:**1)TheTendershouldnotePerformanceSecurityDepositamountandMinimumAnnualAmountpayabletoBBMP.

2) TheTenderersshouldquotetheannual amount equal or morethanthe MinimumAnnualAmount fixed as shown in the Column No. (4) of the above table failing which the bids will be liable toberejected.

3) The Tenderer has to pay the bid amount of particular year in 3 equal installments at the end of each quarter.

## BANK GUARANTEE FORMAT FOR EARNEST MONEYDEPOSIT

To
Zonal Commissioner
Project West, BBMP
Bengaluru

In accordance with your Tender No. dated for the Work of .....(Name of the work) (hereinafter called "the Tender"), M/s. _____one of the Tenderers (hereinafter called the "the Tenderer") having its Registered Office at _____ , wishes to participate in the said Tender and an irrevocable Bank Guarantee against Earnest Money Deposit for an Amount of Rs. _____(Rupees) is required to be submitted by the Tenderer towards the Tender Security.

KNOW ALL MEN by these presents that we,_____ (Name of Bank) of _____(Name of Country) having our Registered Office at _____(hereinafter called "the Bank") at the Request of the Tenderer do hereby unequivocally and unconditionally guarantee the same Amount as stated above. The Bank is bound unto BBMP,Bengaluru – 560 002 (hereinafter called "the Employer) in the same Amount as stated above for which Payment well and truly to be made to the said Employer, the Bank binds himself, his Successors and Assigns by these presents.

SEALED with the Seal of the said Bank this day_____ of 20_____

The Conditions of this Obligation are:

1. If the Tenderer withdraws his Tender after Tender Opening during the Period of Tender Validity specified in the Tender Document; or
2. If the Tenderer does not accept the Correction of the Tender Price in accordance with the Instructions to Tenderers.
3. If the Tenderer having been notified of the Acceptance of his Tender by the Employer during the Period of Tender Validity
   a. Fails or refuses to execute the Form of Agreement in accordance with the Instructions to Tenderers; or
   b. Fails or refuses to furnish the Performance Security in accordance with the Instructions to Tenderers.

We undertake to pay to the Employer upto the above Amount upon Receipt of his First Written Demand, without the Employer having to substantiate his Demand, provided that in his Demand the Employer will note that the Amount claimed by him is due to him owing to the Occurrence of one or any of the Conditions, specifying the Occurred Condition or Conditions.

This Guarantee will remain in force upto and including (Date) i.e. 90 (ninety) days beyond the Tender Validity as such Deadline is stated in the Instructions to Tenderers or it may be extended by the Employer, Notice of which Extension (s) to the Bank shall be received from the Tenderer on whose behalf this Guarantee has been issued. Any Demand in respect of this Guarantee should reach the Bank not later than the above Date.

Date _____
Signature of the Bank _____
Seal of the Bank _____

Signature of the Witness _____
Name and Address of the Witness_____

**FORMAT OF BANKER'S CERTIFICATE/LINE OF CREDIT LETTER**
**(To be Issued in the Letter Head of the Bank Branch)**

Reference Number (Sl. No.)

Place:

Date:

To,

This is tocertifythat Mr./M/s. _____(Name of the Customer) having his/their registered/ administrative office at _____ is a customer of our Bank and is/are engaged in _____ (nature of activity). If the said customer is allotted/awarded with_____(brief details of works), we may extend credit facilities upto Rs _____ lakh, to meet his/theirWorkingCapitalRequirementstowards the execution of the said work order as per the loan policy of the Bank.

Sd/-
Nameof theBank
SeniorBankManger
Address

## Appendix H:

**Functional Requirements of Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years**

| | |
|---|---|
| **Parking Management System** | |
| **Parking Location** | |
| | Parking Management System must geo-reference all the parking lots and shall have the ability to add more locations in future**.** |
| | All parking lots must have one-to-one mapping of all the sensors and POS/Payment systems in that location. |
| | Each parking lot can have a local server for storage and hosting the local parking management application or it can connect via Wi-Fi or other Communication network to central server for exchange of data/information. |
| **Parking Information/Guidance** | |
| | Parking Management System should enable stakeholders/users to obtain real time information about the availability of the parking lot by location based on the occupancy of parking lot. Also, shall have facility to user to be able to view availability by proximity and cost. |
| | The total number of slots and free slots for parking must be displayed on a digital signboard near the parking lots. The Parking Management System's integration with other elements within the tender scope must facilitated is play of parking information at variable messaging displays deployed at key points of interest in the Bengaluru city. |
| | Entry to the parking site should have outdoor displays/screens showingoverall availability of parking slots on real time basis in that particular parking space |
| | Every parking space shall be fitted with occupancy sensors for vehicle detection. Sensor should be intelligent and accurately detect if the vehicles space is vacant or occupied.<br>• Appropriate sensors should be chosen based on the type of the parking spot and its external conditions.<br>• The sensor should be able to detect a vehicle irrespective of the depth or height of sensor installation. Each sensor should have its own unique identification in order to be accurately tracked by the Parking Guidance System.<br>• Each sensor should have an accurate and real time feedback mechanism |

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|---|---|
| | to be detected automatically by the system in case of faults. |
| | Each of the Parking shall be fitted with an aisle light indicator for informing users on their availability on-site:<br>• Light indicators should be installed for all parking lots for motorist to see the available and occupied spaces from the parking lane easily.<br>• Once a parking spot is occupied the total parking slots should automatically get updated.<br>• The fixation of the light indicators to the ceiling should be easy and fast, and should use a quick fastening clips to easy the installation. |
| | Informative Display Panels should be installed at all entry points of the parking lot indicating available spaces for each parking aisle, bay/zone/level, total parking and should be able to be customized by software. The display panel should be easy to understand and must have graphical directional and zone status indication (as red crosses for zone full or green directional arrows to guide drivers to zones with available spaces). |
| | Entry to any parking space should have outdoor displays/screens showing overall availability of parking slots in that particular parking space. |
| | All the Parking Information/guidance system hardware like Sensors, display will be integrated with Parking Guidance Controller which monitors the status of occupancy and controls guidance signs appropriately. |
| **Parking Access Control/Management** | |
| | Each parking shall have parking ticket dispenser machine at the entrance where the ticket can be issued by the machine on pressing the button by the user/operator. |
| | Each entry lane should be equipped with one Entry Device with the following capabilities:<br>• Ticket Dispenser<br>• Medium for motorist to enter Unique Booking Number<br>• EMV compliant CPC reader |
| | The ticket, QR Code and CPC or any other technology used by Developer should be capable of capturing data that is easily retrievable at the exit. |
| | Every vehicle entering the parking space should be stopped by barrier. The barrier is raised when the motorist Is issued a ticket or has been identified as a legitimate user. |
| | In case the parking lot is already occupied to its capacity, the ticket issuing should automatically be blocked and therefore, the barrier should not open. |
| | A message should also be displayed on the outdoor screen stating the same. |
| | The Entry Device should be able to detect and report:<br>• Anti-pass back<br>• Back-out ticket<br>• Low ticket stock |
| | The display on Entry Device should have capability to display messages in English, Hindi and other Regional languages. |
| | Any vehicle, before leaving the parking area, should be stopped by a barrier system at the point of exit from the parking. |

| | |
|---|---|
| | The solution should also include provision to capture the image of the vehicle including license plate view exiting any of the parking spaces and all the information related to the same should be stored at a central server. |
| | Exit of every parking should be equipped with a manned Pay station (booth).<br>• For motorists who enter the parking lot using CPC, the same shall be recorded in the system and while exiting, the payment shall be deducted from that card. If the user fails to show up same CPC which was used while entering, the system should not allow the exit and the user must pay the amount as per business rules as specified by Client.<br>• If any discounting is allowed for parking, the business rules for the same shall be handled with prior approval from LSCL/LMC.<br>• The personnel monitoring the exit Pay Station is also required to manually enter the License number details in the system so that the license number, along with date and time of exit, is stored in the database. |
| | Once the vehicle exits a parking slot, the total parking slots available in that parking space should automatically get updated. |
| | Only after completing the full cycle correctly the transaction will be considered as valid within the car park. However, audit trail of each Complete, incomplete and cancelled transaction should be available in the system. |
| | The solution should be equipped with Anti-pass back technology and be<br>Able to detect and report any instance pass back. |
| | The barrier should remain in closed position for optimal period of time for the vehicle to Pass at entrance and exit. |
| | Barrier Arms should have the following options:<br>In closed position the full arm should be illuminated.<br>During movement the full arm should be illuminated yellow.<br>Once reached open position the full arm should be illuminated Green. |
| | Upon horizontal impact by a vehicle, the barrier arm should get detached from the barrier unit with minimal damage to the vehicle and the barrier.<br>Motor mechanism. An alarm should also be raised and sent to the server |
| | Upon impact during closure, the arm will stop and stay in the same position. Under no circumstances should the arm re-open upon impact. This is top revent keeping the arm open for illegal entries or exits.<br>• The barrier arm should be easy to refit with barrier unit in a short duration (within one minute).<br>• If for any reason and external override (fire system) needs to be connected, then this should only be possible over the Entry/exit Device and the switch should be permanently monitored by the Parking Management System. |
| | The solution should have capability to capture image of the license plates of the vehicles at every entry and exit of each parking lot. The image should be clicked at the entry point when the ticket is issued and at the exit point during payment. The image of the license plate should be linked to the details of the corresponding ticket issued in real- time and stored in the data base for one month. This information will be stored in the server. |
| | Parking Management System shall track vehicles entering and exiting parking lots. The Parking Management System should do so at each floor and |

| | |
|---|---|
| | communicate the data. |
| | The Parking Management System should retain videos of car entering /exiting the parking zone. |
| **Parking Pricing and Payment** | |
| | The Parking Management System should facilitate real time revision of parking fees and should enable real time communication of rules to hand held terminal and parking booths/kiosks from Central facility/Control Centre. |
| | Payment sub system shall have the capability of processing and reporting separately numerous transactions including, but not limited to the following:<br>• Normal transaction<br>• Lost ticket transaction<br>• Insufficient funds transaction<br>• Mutilated or unreadable ticket transaction<br>• Non-revenue (no charge) transaction<br>• Blank or used ticket transaction<br>• Validation transaction |
| | Parking Management System should enable LSCL/LMC or any other appointed third party to facilitate generation of parking receipts and tickets based on occupancy of parking lots and business rules to be amended from time to time. |
| | User shall have the multiple payment options as given below.<br>• Primary mode of payment for parking will be by cash at the Pay Station<br>• Common Payment Card (CPC), FASTag, Credit Card, Debit Card<br>• For bookings through mobile App or Smart Web portal application, payment will be made using e-Wallet, net banking, credit card, debit card etc.<br>• Additionally, the developer can implement innovative and cost-effective payment methods (such as e- vouchers) for customers opting for monthly reserved<br>• Parking passes. |
| **Audit, Performance MIS Reports and Alerts** | |
| | PMS should track each and every revenue source and should ensure no leakages due to manual intervention. |
| | All vehicular passages during the time that the barrier is not functional / down should be recorded and displayed in the reports separately in order to audit the necessary revenue transactions during that time. |
| | System shall daily check whether the vehicles that have entered the premises and are yet to leave. Thereby it should be able to generate alert if any vehicle is over staying in the parking lot over24hrs. |
| | In case of any sensor or barrier non-functional, an alert should be sent to the console and server to ensure that the administrator is informed that the device is not working. |
| | Parking Management System should:<br>• Report occupancy of parking lots to a central software application deployed at the control room.<br>• Include central reporting system establishing the connection between the devices and sensors, and the centralized control room. |

| | |
|---|---|
| | • Include reporting dashboards with location specific thresholds to be set for generating customized reports be capable of monitoring the number of vehicles that entered or exited the parking premises during any given time.<br>• Generate reports for each parking spot, in each of the parking lots capturing utilization, cost, and revenue details, and details of assets, people and etc. These reports should be available in all standard acceptable formats like .csv, .pdf, .txt, etc. |
| **Stand by or Breakdown/Off-Line/Manual mode** | |
| □ | PMS should include the use of wireless handheld device for parking. This device shall be used as a fallback mechanism. However, this device must track every transaction limiting any manual transaction to zero. |
| □ | In case of high traffic at any of the parking lots or during peak hours, it should be possible for the wireless handheld device to be used as central cashiering device (i.e. it should be possible to scan the QR Code on tickets issued by the entry device and issue receipts post payment, so that the motorists could pay for the parking and then drive out quickly), without any time consumed for payment transactions at the exit.<br>• The device should have capability to print parking receipts and bar coded tickets in real time.<br>• Both the functionality of ticket dispensing & cash register should be possible to be combined in one device.<br>• This wireless handheld device should be an online unit, however, in case of network failure, the device should have capability to transact offline and sync with the server as and when connection is restored. |

| | |
|---|---|
| **Maintenance Mode** | |
| □ | The central system and all the equipment (barrier gates, ticket dispenser, POS units etc.) shall support maintenance mode during repair, replacement and testing of equipment. |
| □ | All transactions done during the maintenance mode on a ticket dispenser or a handheld ticketing machine shall be possible only using a special maintenance smart card issued specifically for the purpose. |
| □ | All such maintenance media shall be deposited with the Client and written requests shall be raised by the developer if they have to be issued to them. |
| □ | All transactions carried out in the maintenance mode shall be reported separately similar to exception transactions. |
| □ | The maintenance mode shall be possible only by using a dedicated maintenance “user privilege login” specially created for this purpose. |
| **Central System** | |
| □ | Uploaded data shall not be deleted from system readers or work stations until the central system has provided confirmation that the transactions have been successfully received. |
| □ | The central system shall be able to update its date and time applying time synchronization to servers and using this to in turn update the date and time on all system devices and work stations. |

| | |
|---|---|
| | All active equipment shall have an internally maintained date and time clock synchronize data time interval via the communications controller with the Central System date and time clock. |
| | The time synchronization application in the device shall have the capability to adjust the minimum time interval for updating itself with the central system time and date, and shall be capable to update time as often as every minute (configurable) with the central system. |
| | The central system shall manage all device activity and maintain their logs including at a minimum:<br>• Data storage and processing systems<br>• Financial systems<br>• Customer databases<br>• Sales and transaction systems |
| | All equipment shall operate with a real-time data connection to the central system via the communications network for that equipment. |
| | If the data connection to the central system is temporarily lost, all Equipment shall seamlessly switch to an offline mode in which all data is temporarily stored in internal memory and transmitted to the central system |
| | All equipment shall have sufficient memory to operate in offline mode, with no loss of data, for no less than 168 hours. |
| | The central software shall support managing parking fare tables. |
| | It shall be possible to “future-date” pending fare tables so that they can be uploaded ahead-of-time and automatically activated at the planned date and time. |
| | All ticket dispensers and hand held ticketing machines shall store the current valid fare-set as well as a future “pending” fare-set with activation date and time in order to allow downloads to the device to occur in advance. |
| | When the activation date and time passes, the ticket dispenser and the hand held ticketing device shall automatically replace the existing fare table with the “pending” fare table. |
| | Updated fare-sets shall be downloaded as soon as the central system publishes notice that they have become available. |
| | The central software shall be capable of providing over-the-air fare table updates & firmware updates to the hand held ticketing devices apart from other immediate critical updates. |
| | The systems should be driven by configurable parameters and should provide the flexibility for maximum configuration. The configurations shall be for, but not limited to:<br>• Time based Fare table etc.<br>• User Groups and users privileges<br>• Time validity of ticket<br>• Time validity of CPC<br>• Penalties associated with the CPC misuse<br>• Pass back time on CPC use<br>• Addition & deletion of equipment, nodes, parking lots, handhelds, user groups, users etc.<br>• Reports access |

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| | The system shall handle all exceptions. Exceptions can be, but not limited to:<br>• CPC not being read<br>• QR coded ticket not being read<br>• Low balance on CPC<br>• Manual opening of the barrier gate<br>• Paper ticket lost<br>• QR coded paper ticket not readable after entry<br>• CPC lost after entry<br>• CPC damaged after entry<br>• Any other exception as reported. |
| | Any exception in the normal process shall be flagged separately for auditing and reports should reflect this condition. Mechanisms should be provided to help audit such exceptions. |
| | The system shall handle all degraded conditions which can be, but are not limited of the following:<br>• Ticket Dispenser is not functional<br>• Power failures<br>• Data Connection lost<br>• Particular node down<br>• Central Server down<br>• Any other conditions as reported |
| | Alterative mechanisms and all required systems shall be provided for the system in case system is in degraded state as specified but not limited to the above by the developer. |
| | There should be provision in the system to enter degraded transactions, in case they are not registered because of degraded operations. |
| | There shall be back-up hand held machines capable of performing all the functions of the Parking Station if ever the system is down for some reason. |
| | The back-up handhelds shall be a miniature of the capabilities of the Ticket Dispenser and POS units in all respects such as transaction times,issuing of various fare media etc. |
| | There shall be provision for data transfer from the back-up hand-held machines to the central system once the system is “UP” and running, preferably using wired transfer authenticated by a registered user. In no case there should be any duplicity and missing transactions/data in the central database. |
| | The developer should provide an automated Fault Monitoring Module to generate reports identifying the faults of the equipment if any on a daily basis. The fault monitoring system shall have as a minimum the following capabilities:<br>• Setting up of automatic and manual alerts<br>• Automatic fault detection & reporting<br>• Fault Status reports<br>• Fault Closure reports |
| | The reports shall be non-editable and the Client and/or its representatives shall have real time access to the Fault Monitoring Module with user privileges of the highest level. |

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| | Automatic Backup/Archiving Software shall provide automatic back-up of the entire database. The software shall allow taking complete back up or incremental back as per the desired archival policy. |
| **Monitoring & Control Dashboard** | |
| | The parking control center operator shall be provided with a dashboard and monitoring system that is completely independent from the revenue transaction system and shall be displayed and monitored at the parking facility and in the central control room. This system shall record the following information:<br>• The total number of vehicles crossing the gate loop in each controlled entrance and exit lane (count to be obtained regardless of status of equipment components e.g., gate arm raised).<br>• The total numbers of valid card access vehicles for each controlled entrance and exit lane.<br>• The total numbers of valid daily vehicles for each controlled entrance and exit lane.<br>• The number of violation vehicles for each controlled access lane. A violation vehicle is defined as a forced or un-authorized passage of vehicle over the detection area. |
| | On this dashboard there shall be a schematic layout showing all the connected parking nodes on the GUI. |
| | The various nodes when connected & disconnected shall be represented indifferent color scheme on the GUI of the control center operator. |
| | If any particular node is disconnected from the control room, the same shall raise an alarm appropriate action shall be taken to rectify the same. |
| | The monitoring dashboard shall allow the operator to click on any node &view the details of the “operator” logged in, time duration since logged in, summary of transaction performed, disable/enable Entry/Exit Station or POS terminal, other components of parking system. |
| | The monitoring dashboard shall show the status (connected/ disconnected, faulty/working) of all logical devices (barrier gate, ticket dispenser, camera, CPC reader, receipt printer, QR code reader and other equipment) connected to a particular node when clicking on a node from the monitoring dashboard GUI. |
| | In case of any fault in the devices connected to a node, or connectivity failure with a node, a pop-up message shall appear on the monitoring dashboard work station. The operator has to acknowledge the pop-up message & report the type of fault to the maintenance team & shall record the details to the assigned team/individual into the system. |
| | Fault assignment to the maintenance team shall be managed and controlled by the system software only. Once a fault is assigned by the control room operator or authorized user to the maintenance team, the same shall be displayed in the maintenance module and once fault is closed/ resolved by the maintenance team it shall be updated automatically (incase of active devices) or else updated manually in the software application / maintenance module promptly. |
| **System Data Requirements** | |
| | Client shall own all system data and be able to use the central system to export transactions data for processing / analysis using other software. |

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| | Data shall be retained in the database for at least the financial year previous to the current financial year. |
| | Data received from system devices shall be maintained at the original level of transactions and not be aggregated, consolidated, or combined within the database. |
| | Sufficient data storage capacity shall be provided in the central system to store online a minimum of one year of activity with full transactional data. |
| | All data shall be automatically backed-up daily without human intervention, using the backup devices and media. |
| | Meansshallbeprovidedtoautomaticallyarchivedataolderthanoneyearalongwiththearchivingmediatostorethedata. |
| | The functional capability shall be provided to use such archived data to process comparative type reports, such as but not limited to reports utilizing and comparing data from non-consecutive month periods in two different years, or day-of-week comparisons over multiple month or annual periods. |
| | The transactional database shall store the date/ time stamped details of each transaction including all information transmitted to the central system from the system devices. |
| | Client shall own all system data and be able to use the central system to export transactions data for processing / analysis using other software. |
| | Data shall be retained in the database for at least the financial year previous to the current financial year. |
| **Citizen/ Operator/ Authority Interface** | |
| | The Parking Management System should have a mobile and a web delivery channel for citizens to get real time parking availability and pre-book parking lots using online payment of parking charges facilitated through a payment gate way. |
| | A mobile application and web based user interface should be provided with the following features:<br>• The application should have User module and Operator module.<br>• Through the user module, the user should be able to locate nearest parking lot and also pre-book based on his geographical coordinates. The same information must be made available on map with routing information.<br>• The users should be able to see all the parking lots with exact available space in a real time mode.<br>• While locating nearest parking lot, the latest parking slot availability should be given to the user.<br>• The application should have an Authority/Operator module where the designated personnel will be able to check compliance of slot occupancy against the fees paid by the users. |

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| **Integration with other Systems** | |
| | Integration with Smart City Command Centre and Mobile Applications - Integration of various components provides seamless access of across the departments which help in operation. So the developer shall provide complete support for any third party integration required to integrate parking with |

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| | Smart City Platform of LSC Land mobile applications to get real time data. |
| | Integration with Common Payment Card - A Common Payment Card (CPC) is being envisaged as part of Smart City Initiatives which shall be used for making payments at multiple merchandises across Bengaluru. The CPC shall be issued by Banks and will be accepted at most of the facilities in Bengaluru including utility payments, transit, parking etc.<br>The developer shall work in close coordination with the CPC and other related agencies to make it workable. |
| | The system shall integrate with 3rd Party / Private parking Systems deployed across the City and provide the information to Citizens. |
| **Variable Message Display Board** | |
| | The VMS board will be deployed at nearby circles to the parking locations for ease of public to know the availability and direction of the parking locations. |
| | The Variable Message Display Board Should Consist of Variable Message Sign Board With Local Controller. |
| | A VMD software system shall be provided to the central control Room and /or Command & Control center for message preparation monitoring and control of the variable message signs. IP based Network equipment shall be provided to connect the VMD with the VMD software system. |
| | The VMD software application will allow user to publish specific messages for managing traffic and also general informative messages |
| | VMD software application will allow an operator to seamlessly toggle between multiple VMS points at each workstation in order to send specific messages to specific locations, as well as sending common message to all VMDs. VMD software application will accommodate different access rights to various control unit functionalities depending on operator status and as agreed with the client. Software should be GUI based, and capable to handle 100 VMS signage, user can select desired location in Map, by selecting the location live status of VMS should be displayed. |
| | The minimum size of the VMS will be 3mx2m |

## Technical Requirements of Development, Operation & Maintenance of Parking area including Civil work, Installation of Smart Parking Solutions at K R Market in Chamarajapete Assembly Constituency for a period of 10 years:

| **Parking Controller** | |
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| | All occupancy sensors shall be integrated to the Parking Controller to give real time status of parking lot occupancy. |
| | The parking controller shall be rugged and shall have sufficient no. of I/O terminals to take feed from occupancy sensors. If multiple controllers are required to cater to occupancy sensors, the same shall be provided. |
| | Based on the feedback from the occupancy sensors and Parking System, the controller shall be able to control the parking guidance signals based on their location to guide users accordingly to nearest vacant slot. |
| | The Parking Controller shall have operating temperature range of 0 to +70°C. |

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| **Public Information Signs (PIS)** | |
| | The PIS shall be used to display information to users at each parking station for the vacant slots. |
| | The PIS display board shall be industrial grade flat panels that can with stand the environmental and working conditions found in Bengaluru. The panels shall allow for 24x7 operations. |
| | The display systems shall have built-in test facility, able to carry out self-check at periodic intervals as well as exchange of diagnostic information from the parking management central system including power availability, and its current status. |
| | The display units shall support multi-lingual fonts in English & Hindi for easy reading. |
| | The signs shall include on-going self-diagnostics and shall send an alarm message to the central system in the event that a diagnostic fault is detected. |
| | The signs shall be based on LED technology with wide viewing angle suitable for viewing from varied angles and should have been of Amber color. |
| | The PIS shall be able to display a message composed of any combination of alphanumeric character fonts, punctuation symbols and full graphics. |
| | When messages are displayed in multiple languages, each language shall be rotated through hint urn. |
| | Time for which information is displayed in each language shall be configurable. |
| | Only outdoor rated UTPCAT 6 cable shall be used to connect the device to the respective switch port. If for any case, the distance between the switch port and device exceeds 90 m, use outdoor rated multi-mode fiber cable with environmentally rugged media converters. |
| **Parking Guidance Signal** | |
| | The Parking Guidance Signal shall be used to display information to users at each parking station for the vacant slots. |
| | The Parking Guidance Signal display board shall be industrial grade flat panels that can withstand the environmental and working conditions found in Bengaluru. The panels shall allow for 24x7 operations. |
| | The Parking Guidance Signal shall be of full matrix type with provisions to show Parking availability (in numeric format) and guided with arrow. |
| | The Parking Guidance Signal systems shall have built-in test facility, able to carry out self-check at periodic intervals as well as exchange of diagnostic information from the parking management central system |
| | The display units shall support multi-lingual fonts in English, Hindi for easy reading. |
| | The signs shall include on-going self-diagnostics and shall send an alarm message to the central system in the event that diagnostic faults detected. |
| | The signs shall be based on LED technology with wide viewing angle suitable for viewing from varied angles and should have been of Amber color. |
| | The PIS shall be able to display a message composed of any combination of alphanumeric character fonts, punctuation symbols and full graphics. |
| | When messages are displayed in multiple languages, each language shall be rotated through in turn. |
| | Time for which information is displayed in each language shall be configurable. |

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| | Only outdoor rated UTPCAT 6 cable shall be used to connect the device to the respective switch port. If for any case, the distance between the switch port and device exceeds 90 m, use outdoor rated multi-mode fiber cable with environmentally rugged media converters. |

## Antivirus

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| | Antivirus shall be able to detect and block malicious software in real time, including viruses, worms, spyware, Trojan horses, adware, and Rootkit etc. It shall provide zero-day detection technology. |
| | Antivirus shall protect the system from multiple forms of anomalous network behavior that is designed to disrupt system availability and stability. |
| | Antivirus shall be able to identify infections by name, category, severity, hosts and user etc. |
| | Antivirus shall be able to report Bot incidents by specific malicious activity (spy ware, IP scanning, spam etc.).The antivirus shall have built in intelligence and co-relation capability to inspect, detect and block active and dormant bots. |
| | Antivirus shall be able to block devices based on Windows Class ID. Devices shall include USB, Infrared, Bluetooth, Serial Port, Parallel Port, Fire Wire etc. Anti-virus shall block or give permissions for such devices. |
| | Antivirus shall protect transmission of data being sent to hacker system who has spoofed their IP or MAC address. |
| | Antivirus shall scan email traffic including email client like Outlook. |
| | Antivirus shall include content filtering and data loss prevention. |
| | Antivirus shall have features to prevent peer to peer sharing, streaming media, games and other applications from internet. |
| | Antivirus shall have built in URL filtering. |
| | Antivirus shall provide standard and customized reports. |

## Firewall

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| | Firewall shall have the capability for proactive network attack detection. |
| | Firewall shall prevent replay attack. |
| | Firewallshallhaveaunifiedaccesscontrolwithfunctionalitiessuchas:<br>• Brute force attack mitigation<br>• Sync cookie protection<br>• Zone based IP spoofing<br>• Malformed packet protection |
| | FirewallshallhaveanIntrusionPreventionSystem(IPS)withfollowingfeatures:<br>• StatefullOperation:<br>➢ IP Defragmentation<br>➢ Bi-directional Inspection<br>➢ Access Lists |

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| | • Alert sand updates:<br>➢ Alerting SNMP<br>➢ Log File<br>➢ Syslog<br>➢ E-mail<br>➢ Daily and emergency updates<br>• Security Maintenance:<br>➢ 24/7 Security Update Service<br>➢ Real-time and History reports of Bandwidth usage per policy<br>➢ Protocol anomaly detection<br>➢ IPS attack pattern obfuscation<br>➢ User role based policies<br>➢ User based application policy enforcement<br>➢ Provision for external bypass switch |
| | Fire walls hall have a file-based antivirus with following feature:<br>• Antispyware<br>• Anti-adware<br>• Anti-key logger<br>• Anti-malware<br>• Antivirus<br>• Anti-spam<br>• Scanning of HTTP, SMTP, IMAP, FTP protocols<br>• Signature database<br>• Integrated enhanced web filtering<br>• Redirect web filtering |

## Online Web-based Portal and Mobile App:

The Online Web-based Portal and Mobile App are aimed at providing on-the-go access to various services and facilities available in BBMP. Both will serve as windows of information about Parking Infrastructure at BBMP and as a platform to deliver services online while providing an avenue to disseminate information on Parking facilities and present status to citizens.

## Mobile App-Functional &Technical Requirements (To be linked with BBMP website/portal):

| Functional Requirements | Technical Requirements |
|---|---|
| i. All applications, content, data, and information related to the App and users should be securely hosted and saved in the Data Centre.<br>ii. Free to download and use for all citizens, guests and visitors.<br>iii. Should be light, intuitive, easy to use, responsive, secure and easy to maintain.<br>iv. Compatible with and responsive to all leading smart phones on Wi-Fi, GSM and CDMA networks. | i. Shall be developed in an open platform<br>ii. Should be scalable and technically adaptable to future enhancements<br>iii. Should be published and released in all the major platforms including iOS, Android, Blackberry, Symbian and Windows.<br>iv. Should support Unicode and be multilingual in at least English and Hindi |

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| v. Operating System (OS) should be independent and available on all major OS platforms including iOS, Android, Windows, Symbian and Blackberry.<br>vi. Development of the app to be undertaken on Open Platform, if new mobile OS is introduced in future.<br>vii. As and when required, up gradation of the App, in line with the evolvement of mobile OS.<br>viii. Appropriate tags should be built-in the introduction text and content of the Smart App and Portal so that they are displayed in the top search results.<br>ix. Updation and management of information and content, including information related to Smart Parking initiatives, on the Mobile App throughout the concession period. | v. Should be easy to update as some data will be updated daily. Ability to collect data with high volume, velocity, and variety.<br>vi. Should track GPS location of the user device.<br>vii. Should provide accurate mapping and navigation services.<br>viii. Collect data categorically without impacting citizen's privacy issues<br>ix. Live feed of parking lots and number of free spaces should be provided to app.<br>x. App should confirm acceptance of payment and reserve/cancel the parking lots accordingly.<br>xi. Shall be SSL (Secured Socket Layer) compliant. |

## Online Portal – Functional & Technical Requirements (To be linked with BBMP website/portal):

| Functional Requirements | Technical Requirements |
|---|---|
| i. Create and manage up-to-date information and content, including information related to all Smart Parking initiatives, on the Online Web – based Portal throughout the project duration<br>ii. All applications, content, data, and information related to the Online Web- based Portal as well as its users should be securely hosted and saved in the Data Centre.<br>iii. Should be light, intuitive, easy to use, responsive, modular, secure, and easy to maintain.<br>iv. Should support customization of Look and feel toBBMP/BBMP's requirements.<br>v. Developer should ensure submission of security audit certificate and security audit reports for the developed portal and the audit has to be carried out by any of the Agencies like ST&QC, ETDC, CERT-In, Min of Electronics & Information Technology (GOI) or any other Agency which BBMP decides.<br>vi. Should be built on industry leading framework and support seamless integration with the backend systems, to easily retrieve and save data. | i. Should be based on Open Standards.<br>ii. Should integrate with any other portal products through open standards such as HTML, XML, RSS, web services, and WSRP<br>iii. Should support encryption and compression features<br>iv. Shall be OS independent. It must run on Windows, UNIX, Apple and Linux operating systems.<br>v. Site must be "responsively designed" to accommodate mobile users. This must include accommodations for slower, cellular internet connections.<br>vi. Portal must be secure in all the way and all the latest security implementations like https, xss, sql injection, etc should be implemented to avoid any hacking.<br>vii. The site must be designed for continuous operation, 24 hours a day, 7 days a week with maintenance window clearly defined.<br>viii. Shall be browser independent and responsive to run in the same manner on leading browsers like Google Chrome, Mozilla Firefox, Safari, Internet Explorer, etc.<br>ix. Shall support Unicode and be multilingual in at least English and Hindi.<br>x. Shall have provision for patches, hotfixes and bug fixing solutions.<br>xi. Shall adhere to the best possible security standards in the industry.<br>xii. Shall support broad range of standards as |

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| vii. Portal must be Omni channel i.e. its design should be such that it can be viewed easily on laptops, tablets and mobiles.<br>viii. Should be browser independent and work seamlessly on all leading browsers.<br>ix. Should have workflow capabilities with regard to the content approval and publishing process.<br>x. Provisions to track and generate web traffic reports for Portal administrators | applicable<br>xiii. Shall support minimum Web 2.0 capabilities<br>xiv. Shall be SSL (Secured Socket Layer) compliant and the Developer has to provide appropriate SSL certificate before the portal is made available on public domain.<br>xv. Shall adhere to W3CAG, GIGW, and G.O.I guidelines |

## Mobile App and Web Portal–Required Features and Functionalities

All the requirements, features, and functionalities listed below, but not limited to, should be available by the Developer on both the app and the web portal.

**a)** Citizen registration

i. One-time online registration to be done and stored in the data center.

ii. Terms of service to be accepted by the user prior to log-in

**b)** Parking Guidance System

i. Current GPS location determined.

ii. User enters final destination.

iii. Nearest available parking spaces are shown using maps in decreasing order of distance, the rates of each parking applicable at that time shall also be displayed and if user decides to reserve it, reservation is done with payment done from e-wallet/ payment gateway or any other method defined in the RFP.

iv. Number of vacant parking slots in a particular parking on map should also be shown to user.

v. User should be able to locate alternate route and parking lot after seeing the traffic congestion either by Online Web-based Portal or third party portal.

vi. Limit set on the advance time for online reservation of parking slot (24hrs).

vii. User can take monthly pass for indoor parking only.

viii. Online cancellation for the spot should also be provided in case of online reservation.

**c)** Integration with Third Party Services and Apps:

i. The Developer has to ensure that the App can integrate and interface with popular and established third party services and applications (private or public) that wish to integrate with Mobile App, upon approval from BBMP.

ii. The App should integrate with and allow payments through the selected third part shared services for Payment Gateway and e-Wallet.

iii. The App should have provisions to integrate with Emergency Response services.

iv. The parking application should be integrated with the BBMP app / Web portal in near future with the approval of BBMP.

**d) Frequently Asked Questions (FAQs)** and Contact Details of different offices of BBMP:

i. The App should have a section detailing frequently Asked Questions (FAQs) related to Smart initiatives and their related responses.
ii. The section should also provide contact information of Helpdesk Customer Service for parking problems, if any.

**e)** Settings:

i. User should view version and details of the App

ii. User should have the option to toggle between sending current GPS data to server or not.

iii. User should have the option to select a specific button on their cell phone to set as SOS short-cut, when pressed and help continuously for a certain amount of time.

iv. User should be able to toggle whether or not to send anonymous user data that can be helpful in fixing bugs or solving crashes.

v. User should be able to select notification settings.

vi. User should be able to select app notifications to be displayed on the home/locked screen.

vii. User should have ability to enable/disable sound alerts

**f)** Feedback/Complaint/Suggestion:

i. User should able to give their suggestions/ feedback/ complaint through the portal/app

ii. User should Able to track their complaint status

iii. Generation of reports on various types of complaints.

**g)** Officers Login

i. User should be able to search the vehicle on real time basis.

**h)** Booking/Payment of Parking Lot

i. Users should be able to book the ticket through the app.

ii. Pre-booking of the vacant lot should also be made available for the citizens

**Real-time Monitoring and Dynamic MIS Reporting:**

i. Parking Management System shall include central reporting system establishing the connection between the devices and sensors and the Central Control Center.
ii. Solution shall include reporting dashboards with location specific thresholds to be set for generating customized reports
iii. Shall be capable of monitoring the number of vehicles entering/ exiting the parking premises during any given time
iv. Shall generate real time reports for each parking spot, in each of the parking lots capturing utilization, revenues, status of assets and personnel. These reports should be available in all standard acceptable formats like .csv, .pdf, .txt, .xls etc.
v. Ensure analytics on the following the matric areas:

- Enforcement–Daily report on violations
  - Peak parking demand on hourly basis at each parking lot;
  - Daily, weekly, monthly, quarterly and yearly average occupancy at each parking lot;
  - Average time of occupancy;
  - Revenue trends daily, weekly, monthly, quarterly and annual

**IT Security:**

Developer shall Undertake all measures for Cyber security, protection of information and communication technology systems of this Project from cyber-attacks that are purposeful attempts by unauthorized persons to access ICT systems in order to achieve the target of theft, disturbance, damage, or other illegal actions. The Private Operator shall detect, analysis and do mitigation of vulnerabilities and protect Central Control Centre including Data Centre from cyber-attacks throughout the Contract Period. The developer should have to include the latest gen firewall, IPS/IDS etc as safety measure to ensure the proper security of the data center and all associated software's.

**Parking Software Supply, Installation, and Testing & Commissioning of parking management system–Centralized Reporting & Management software with following features:**

i. Shift reports including Operator name, Shift number and Shift wise traffic &transaction details
ii. Traffic Report both in summary and detailed formats
iii. Transaction details, time wise, period wise and shift wise
iv. Systems Reports including Gate Statistics, System Runtime, and System Reboot.
v. Daily &Monthly Summaries
vi. Other reports as per requirement of BBMPfor efficient management

## Centralized Reporting & Management software: Supply, Installation, Testing & Commissioning of Parking revenue control / Billing & payment collection software:

i. Automatic Fee Computation based on either Fixed or Hourly plans. Provision for different tariff plan for different parking lots.
ii. Provision for user name and Passwords to restrict use to authorized persons only.
iii. Separate provisioning for Administrator and for General User
iv. Flexibility of Housekeeping within the software, which shall include Re-indexing,
v. Deleting, Backup & Restoration of Data
vi. There shall be a provision that new entries to the car park are not permitted in case of the full occupancy of the Car Park
vii. Unique Identity for each transaction shall be created
viii. There shall be a provision to auto-capture images of cars at entry. Further there shall be a provision of storing such images with the unique identity, within the system and to recall the same at exit.
ix. Provision for pre-booking of parking space with flexibility of different or same charges for pre-booking, provision for cancellation of pre-booking, some percentage of charges for previous hours before actual booking hours.

## Software for implementation of PMS:

i. Shall be implemented in the Integrated Industry Standard Open Platform to manage, monitor and control the Smart parking initiative.
ii. Shall monitor and configure all devices with respect to parking (sensors, displays etc.)
iii. Shall control the system functionality and enable remote monitoring from other computers.
iv. Shall provide capability to create full report of exact location with respect to floors, areas, levels, etc. Shall be customizable and able to update the parking lot occupancy and entry/ exit of vehicles in real time.
v. Shall provide real time status of all system components.

vi. Shall report alarms/ notifications when devices are un-connected; in the case of any equipment failure, on-screen alarm is displayed/ notified at the central control centre.
vii. Should issue notifications if a car is abandoned after the requisite period of time.
viii. Shall provide full graphical plan information of the car park with exact locations.
ix. Shall allow download of the information and configuration of fields for maintenance purpose.
x. Shall have built in tools for third party integration to obtain real time information.
xi. Shall provide access at user levels with passwords.
xii. Shall have historic log for available spaces, period of time.
xiii. The software should be able to handle manual overriding of available spaces, special parking requirements for reserved spaces and handicapped lots.
xiv. Shall manage energy saving of the car parks according to car park occupation.
xv. Shall reduce brightness of light indicators manually or automatically according to occupation.
xvi. Shall monitor any CCTV camera with IP connection.
xvii. Shall monitor electricity consumption, voltage, energy and harmonics.

## Central Control Room/ Helpdesk

The central control room/ helpdesk will be the nodal point of availability of all online data and information related to smart sensors based Parking solution and connected to BBMP network of services. It shall consist of the following:

i. Centralized System with video wall f o r live monitoring.
ii. Equipment health monitoring and generates alerts.
iii. Centralized data storage and its management.
iv. Integration with Third Party Shared Services.
v. Online backup of all data in.
vi. Public Complaint Handling (non-working of app, portal, transaction failure etc.)

Central Control Centre shall be established with all hardware, software and network infrastructure including switches, firewall, routers, storage servers, application servers, video-wall and other necessary equipment. The same shall be operated & maintained by the Developer throughout the concession period.

## CCTV Based Surveillance solution for all Parking lots:

CCTV based surveillance solution enable BBMP to plan events, monitoring of Infrastructure, encroachments etc. It helps in enforcement of law, monitoring of public areas, analyse patterns, and track incidents enabling quicker response and other following attributes:

- Help for more effective operations
- Quicker response to incidents
- Increased situational awareness
- Increased attractiveness to businesses and workers
- Improved planning and resource allocation
- Improved communications about incidents

CCTV based Surveillance Cameras should cover areas of all parking lots given in RFP document. CCTV feed for 30 days will be kept in a local server in individual

parking lots or combination of two or more parking lots. FTTH, MPLS based network with suitable b and width shall be provided at each parking lots to view the online CCTV footage from the central control room. Applicants will be responsible for design and engineering of all the network components for the live CCTV feed and analytics to the central control centre, to meet functional requirement of project with suitable software interface both at back end and frontend and facility for storage of Camera feed up to 30days. Number of cameras toto be installed shall be as per site requirement so that complete area of all parking lots shall be covered by these CCTV cameras and all parking slots shall be separately identifiable through these CCTV cameras. Additionally one lane all-around parking lot beyond parking area shall also be covered so that unauthorized parking near parking lot can be identified.

## Two Wheelers parking:

Camera-sensor based identification can also be proposed for two wheeler parking in the mentioned parking locations the camera having features for identification of two wheelers will be installed by the Developer. The online Updation shall be available at the central server, CCC of BBMPand Mobile App.

i. Camera based parking occupancy detection system with capability of outdoor and indoor based two wheeler occupancy detection.
ii. Shall provide reliable detection within 20 seconds of two wheeler parking/ un-parking event occurrence.
iii. Shall support all weather operations – day/ night/ rain/ fog with reliable detection better than 80% (clear weather 90% reliability).
iv. Shall be connected online with central control centre.

## Training & Capacity Building:

## Training & Capacity Building–Scope of Work

The purpose of this section is to define the scope of work for training and capacity building to be implemented at various levels namely:

a) Employees of BBMP officials.

b) The developer's scope of work also includes preparing the necessary documentation and aids required for successful delivery of such trainings.

c) The details provided in this section are indicative and due to the complex nature of the project the number of training sessions may increase. Over and above the team considered for performing the training as detailed in subsequent sections,

d) Developer will develop a training and capacity building strategy that will also include a detailed plan of implementation.

e) Developer will get the Training and capacity building strategy including training material finalized with City SPV before starting the training programs.

f) Developer will prepare all the requisite audio/visual training aids that are required for successful completion of the training for all stakeholders.

## Maintain and Hand over System Documentation

Maintain and Handover System Documentation to the BBMP: Developer shall maintain at least the following minimum documents with respect to the Smart Parking Management System:

i. High level /Low Level design of whole system

ii. System requirements Specifications(SRS)

iii. Any other explanatory notes about system

iv. Trace ability matrix

v. Compilation environment

Developer shall also ensure Updation of documentation of software system ensuring that:

i. Source code is documented and provided to BBMP/BBMP

ii. Functional specifications are documented

iii. Application documentation is updated to reflect on-going maintenance and enhancements including FRS and SRS, in accordance with the defined standards

iv. User manuals and training manuals are updated to reflect on-going changes / enhancements.

**Sl No** **Tentative Specifications (**Service provider may submit any other improvised specifications for enhancement of services, subjected to acceptance by BBMP**)**

## Equipment for PARKING PGMS Components

### 13 Entry / Exit Boom Barrier Gate

A boom barrier, also known as a boom gate, is a bar, or pole pivoted to allow the boom to block vehicular or pedestrian access through a controlled point. Typically the tip of a boom gate rises in a vertical arc to a near vertical position. Boom gates are often counterweighted, so the pole is easily tipped. Boom gates are often paired either end to end, or offset appropriately to block traffic in both directions. Some boom gates also have a second arm which hangs 300 to 400 mm below the upper arm when lowered, to increase approach visibility, and which hangs on links so it lies flat with the main boom as the barrier is raised. Some barriers also feature a pivot roughly half way, whereas the barrier is raised, the outermost half remains horizontal, with the barrier resembling an upside-down L when raised.
Support external and built in ground sense, aluminum alloy metal corrosion resistant 1.5-2mm thick, brushless DC movement, chassis made of steel plate treated with Orange color high grade automotive paint to prevent corrosion and fading. Change over from power supply to UPS to manual, insulation class F, protection level IP 44.

| | |
|---|---|
| Barrier Boom Arm Length | Maximum3.5m |
| Opening/closing time | 1.5s |
| Duty cycle | 100% |
| No. of digital inputs | 4 |
| No. of relays/digital outputs | 4 |
| Boom Arm | Folding boom with Breakaway flange with sensor to detect |
| MTBF | 10 million cycles |
| Enclosure rating | IP54 |
| Enclosure Type | The Barrier Cabinet and Boom should have finished with an anti-corrosion paint system. The Barrier gate control system shall be located inside the main Barrier Cabinet and should give easy access to all electrical components for connection, maintenance and programming, including the power isolation switches |
| Safety Sensor | The Barrier gate should have infrared sensors to detect the presence of human, vehicle and other object for extra safety. |
| Temperature range | 0□Cto+55□C. |

### 14 ANPR Camera

Automatic Number Plate Recognition Camera of 2MP
Dimensions: Body : 121.5mm x 109mm x 231mm, Support : 160mm(L)
Power supply: AC24V (± 10%) PoE + (IEEE 802.3)
Consumption: 15W (PoE +, 17W)
CPU: Embedded soc arm11, 528MHZ, 256MB DDR2, 256Mb Flash memory.
Firmware: Firmware update via HTTP.
Supported Operating Systems: Windows 2000, Windows XP, Windows Vista, Windows 7, Windows 8.
Browser: Windows Internet Explorer 6.0 or higher.
CPU Requirements: Intel pentium 4 1.8GHz or higher.
RAM Requirements: 1GB or higher, standalone graphics card.
Mobile: Supports iPhone, iPad and Android
Supports SD / SDHC card for cyclic recording.
Operating temperature: -40 ℃ to 50 ℃.
Alarm Inputs / Outputs: 1 digital input (TTL, +3 to 5VDC) / 1 output (MOS relay contact to N.O., max. 40VDC / 300mA load)
Sensor: 1 / 2.8 “3.23MP CMOS
Focal length: 2.8-12 mm (Zoom / motorized)
1 / 2.8 “CMOS Image Sensor
Diaphragm: F1.4
Viewing Angle: 91.2 ° to 25.5 ° (H), 68.4 ° to 19.1 ° (V), 114 ° to 31.9 ° (F)
Ø92 heat resistant glass
Progressive Scan
Maximum wavelength: 850nm
IR Cut Filter: Automatic / Program / Day (Color) / Night (Mono)
Minimum illumination: 0.02 Lux to F1.4 (low light mode) / 0 Lux with IR LED On
White Balance: Auto / Tungsten / Interior / Fluorescent1 / Fluorescent2 / Exterior1 / Exterior2
Backlight Compensation: Off / On
Shutter speed: 1/30 (1/25) s to 1 / 8000s
Video Protocol / Video Compression: RTP / HTTP, RTP / TCP, RTP / UDP, Multicast
Protocols: IPv4, IPv6, TCP, UDP, HTTP, SMTP, NTP, DDNS, UPnP, FTP, ARP, DHCP, PPPoE, DNS, RTSP, RTCP, Telnet, ICMP, IGMP, ONVIF Profile S, SNMP, SIP, Bonjour
Channels: CVBS 1.0Vp-p, 75 ohm, BNC Connector
Encryption: Base64 HTTP Encryption
Access: Multi-user access levels with password protection IP filter
Multiple IP Addresses
Up to 8 simultaneous users
Network Interface: 10Mbps / 100Mbps Base-T, RJ-45
RTSP Authentication: On / Off
IP protection: IP66

Video compression: H.264, JPEG
Bit rate: 128Kbps to 8Mbps. Frame rate in controllable bits on the fly. Supports VBR / CBR / GOP

## 15 Entry Ticket Dispenser / QR Code Unit

| | |
|---|---|
| Display : | DisplayshallbeLCDcolourgraphicsuserdefinabledisplay240x 160pixelstypewithdamageresistantlenscapableofdisplayinggraphics andimages. |
| Ticket Capacity : | Dispenserpaperrollcapacityshallbeatleast5,000 tickets per roll and shall have a built-in photo sensor to give paper roll low level indication. |
| Printing technology : | The Dispenser shall have built-in high speed ticket printer based on thermal technology and able to print tickets with text and graphics including QR code. Tickets issued shall be cut with a self-sharpening ticket cutter |
| Printing Speed | The print speed shall not be less than 150mm/s for both text and |

| | |
|---|---|
| : | graphic and at a minimum resolution of 200 dpi (8dots/mm). |
| Communication : | Dispenser controller device shall communicate over Ethernet with the Central Server. No proprietary RS485 cabling or other proprietary system is allowed for communication to dispenser |
| Interface : | Dispenser controller shall support USB, Serial, and RS-232communication mediums to add on devices. Dispenser controller shall have additional inputs and outputs assignable tofunctionslikeopen/closedsignrelaysforbarriergatesandindicationlightsoperation. |
| Controller : | The Dispenser Control unit shall include CPU, input/output terminals, and power supply and logic board for display. |
| Environmental : | All dispensers shall come with standard equipment such as heater and cooling fan using a thermostatic controller to ensure a reasonable operating temperature for components in various weather conditions. Humidity range is up to 90% non-condensing. |
| Enclosure : | The Dispenser shall have Front/ Rear door for easy access for ticket loading and logic board access. The Dispenser housingshallbeatleastIP54. |
| Operating Temperature : | The Dispenser shall haveoperatingtemperaturerangeof0□Cto +55□C. |

**16 Entry / Exit Fixed CCTV Cameras**

Same as Sl No. 1

**17 Parking Controller cum Operator Console & Command centre.**

Same as Sl No. 7

**18 Thermal Receipt Printer**

Same as Sl No. 2

**19 QR Code Reader**

Same as Sl No. 3

**20 Parking Availability LED Display Board**

| | |
|---|---|
| Function | PIS shall be used to display information to users at each multi-level parking station for the vacant slots. |
| Display lines | Type A:Mounted outside MLP area indicate vacant parking lots on each floor to the users shall have single line with 15 Characters (Alphanumeric) each for the all the respective floors. |
| | Type B: Mounted at designated locations on each floor to indicate vacant lots for that particular floor shall have single linewith15Characters(Alphanumeric)each |
| Color | Multi color |
| Language | The display units shall support multi-lingual fonts in English and Kannada for easy reading. |
| Character height | 60mmatleast |
| Weight | Shallbelessthan2.0kg |
| Type of protection | IP66 |
| Temperature | 0°Cto+55°C. |
| Power Supply Requirement | 240Vacat20W |
| LED type | Ultra bright All nGaPLEDs |
| | 8000mcdat20mA,300viewingangle |
| | Suitable for outdoor condition under bright sunlight |
| Viewing distance | >50meters |

| | |
|---|---|
| Communication Interface | RS232andEthernet |
| Reliability | MBTF:100000hours |
| And maintainability | MTTR:15min. |
| Self-Diagnostics | The display systems shall have built-in test facility, able to carry out self- check at periodic intervals as well as exchange of diagnostic information from the parking management central system including power availability, and its current status. |

## 21 PARKING / Off-Street Local Server including the OS and Database License (As per Bidder's Solution)and accessories

| | |
|---|---|
| Make | HP/Dell/Lenovo |
| Form factor/height | Tower |
| Processor | Intel®7thgenerationCore™i7-7700Processor(3.60GHzBaseFrequency/ ClockSpeed,4MCache,4core) orhigher |
| Motherboard | IntelQ150chipsetorbetter |
| Memory | 16GB RAM,DDR4,Shallbe expandableto32GB |
| RAID Controller | RAIDcontrollerwithRAID-0,1and5support |
| Network | 4GigabitEthernetNIC |
| Ports | 2RS232, 1RS485 |
| Network interface controller(NIC) Trusted platform module(TPM) | LPT-Parallel |
| PCIe3.0Expansion slots(x16/x8) | Total6USBports(min.2atfront) withatleast2USB3.0 |
| USB ports | HDMI/DVI |
| WiFi | Intel ®Wireless–N72602AC 802.11ac,2x2,2.4GHz/5GHz+Bluetooth®4.0 |
| Storage | Usable 2TBSAS/SATAorBetterwithRAID-0 |
| Monitor | 18.5”or higher wide screen LED Backlit based TFTs, Resolution–1366X 768or better, TCO Displays 5.0 certified or better monitor should be of same make of offered PC Brand. |
| Input inter face | Keyboard and Mouse(Same make of PC) |
| Operating System | OperatingSystemshallbeLicensedversionof64bitlatest versionofLinux/Unix/ Microsoft®WindowsbasedOperatingsystem |

## 22 Handheld Terminal Ticket Machine(POS)

Same as Sl No. 4

## 23 GSM / GPRS connectivity from Hand held to BBMP Datacenter

## 24 Connectivity between Off-street Parking Lot to BBMP Data center

Both Network and cloud method.

## 25 OnlineUPSwith6 hour backup(As per Bidder's Solution)

## 26 PGMS Application Software for PARKING

Centralized Dashboard for Manager/Control Room;
Centralized dashboard containing the data from all Gates in one place.;
Display basic metrics like :-
Total vehicles in a day/week/month,
Vehicles currently present inside,
Traffic movement;
Records can be view in tabular format for any day, week or month;
Analytics section includes record analyzed in the form of graph on daily, weekly and monthly basis; Complete details of the Vehicles;
Entry/Exit time;
Type of vehicle owned Vehicle number / tag ID/ name of person etc;
Dashboard contain the provision for debarring the Park+ TAG if people leaves the society or for any unwanted Vehicle;
Can generate notification on Guard App if any commercial vehicle (Ola/ Uber) stayed for overtime inside premise;

**27 Web Portal & Parking Mobile App for Consumers**

**28 PGMS Server including the O Sand Data base License(As per Bidder's Solution)**

**29 Any other item which service provider feel essential for scope of work**